

学位論文

Testis-specific hnRNP is expressed in colorectal cancer cells
and accelerates cell growth mediating ZDHHC11 mRNA
stabilization

(精巣特異的 hnRNP は大腸癌で過剰発現し ZDHHC11
mRNA の安定化を介して腫瘍増殖を促進する)

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Original Research Article

Title page:

Testis-specific hnRNP is expressed in colorectal cancer cells and accelerates cell growth mediating *ZDHHC11* mRNA stabilization

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Y.M., H.K. and M.F. contributed equally to this work. Y.M., H.K. and M.F. provided major input regarding the conceptual development of the studies, wrote the manuscript and supervised all of the investigations. Y.M. and H.K. performed the biochemical experiments. Y.M., K.T., K.A., N.U. and S.K. collected clinical biopsies. K.M., H.T. and T.O. helped to design the studies, interpret the data, and prepare/review the manuscript. All of the authors read and approved the final manuscript.

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Abstract:

Various heterogeneous nuclear ribonucleoproteins (hnRNPs) have been reported to be associated with cancer cell growth. However, it remains unclear whether hnRNP G-T, which is specifically expressed in the testis, is expressed in tumor cells, and whether hnRNP G-T expressed in colorectal cancer (CRC) cells is associated with tumor progression. We herein report that hnRNP G-T promoted cancer cell growth and stabilized mRNA of *ZDHC11* in CRC. The cell growth was inhibited by transfection of siRNA of *hnRNP G-T* in cancer cells, but not in non-cancerous epithelial cells. The

tumor promotive effect of hnRNP G-T was confirmed in an HCT116 transplanted mouse model. RT-PCR and Western blotting indicated the augmentation of hnRNP G-T in CRC in comparison to non-cancerous cells. The downregulation of hnRNP G-T inhibited cancer cell growth and promoted apoptosis in CRC. A transcriptome analysis combined with immunoprecipitation revealed that hnRNP G-T stabilized 174 mRNAs, including *ZDHHC11* mRNA. The cell growth was also suppressed by the transfection of siRNA of *ZDHHC11* and the mRNA and the protein expression was decreased by the transfection of siRNA of *hnRNP G-T*. These results suggested that hnRNP G-T promotes the cell growth of CRC by regulating the mRNA of *ZDHHC11*. Therefore, hnRNP G-T will be highlighted as an effective therapeutic target with less adverse effects in CRC therapy.

Keywords: hnRNP G-T, ZDHHC11, Colorectal cancer, ATM, ATR

TEXT:

1. Introduction

Colorectal cancer (CRC) is a common cause of death worldwide [1]. The prognosis of CRC has now been progressing by the development of molecular target therapy and the development of chemotherapy regimens. However, progressive CRC is still associated with a high rate of mortality; thus, a novel therapeutic target for CRC is desired [2].

Posttranscriptional events, such as splicing, stabilization and degradation of RNA, are an essential step for the development and differentiation for normal tissue. RNA binding proteins, such as heterogeneous nuclear ribonucleoproteins (hnRNPs), has essential roles in RNA regulation in normal cells and in CRC cells [3, 4]. For example, previous reports revealed that hnRNPA1 is augmented in CRC cells [5] and that it stabilized oncogenic mRNAs, such as cyclin D1 and c-Myc [6]. We subsequently showed that hnRNP A1 was degraded when binding with microRNA-18a, suppressing tumor progression through apoptosis in CRC cells [7]. hnRNP K, the expression of which is correlated with the prognosis of CRC, stabilizes the mRNAs associated with cancer progression, including gastrin [8] [9]. Likewise, we constructed siRNAs

targeting 20 representative hnRNPs and discovered that all of these hnRNPs supported the progression of CRC [10]. These investigations suggest that hnRNPs may be attractive therapeutic targets for CRC.

Heterogeneous ribonucleoprotein G, which is specifically expressed in the testis (*hnRNP G-T: Gene symbol: RBMXL2*), is a member of the hnRNPs that plays essential roles in spermiogenesis [11, 12]. Ehrmann et al. showed that hnRNP G-T prevents the mis-splicing of mRNAs, which is associated with meiosis through the inhibition of splicing factors, such as *Tra 2 β* , and binding with splice site sequences, thereby promoting the maturation of sperm [13]. However, whether hnRNP G-T is associated with disorders, including inflammatory and neoplastic diseases, has not been clarified. We previously demonstrated that hnRNP family molecules, such as hnRNP A0 and hnRNP H1, have pivotal functions by performing siRNA screening against 20 hnRNPs in colorectal cancer cells [10, 14]. We also found—by siRNA screening—that hnRNP G-T has tumor supportive functions. However, no reports have investigated the roles and mechanisms of hnRNP G-T in the progression of CRC.

In the present study, we confirmed the tumor promotive effects of hnRNP G-T, which was highly expressed in human CRC cell lines and tissues, but which had no

effect in non-tumorous cells. We also investigated the mechanism underlying the association between hnRNP G-T and tumor progression in CRC cells.

2. Materials and Methods

2.1 Cell culture

Human CRC cells (HCT116 and SW480) (American Type Culture Collection [ATCC], Manassas, VA, USA), human pancreatic cancer cells (SUIT-2) (Health Science Research Resources Bank, Osaka, Japan) and human colon epithelial cells (HCEC-1CT) (Summit Pharmaceuticals International Corporation, Tokyo, Japan) were cultured in the appropriate medium [10] in a humidified atmosphere with 5% CO₂ at 37°C.

2.2 siRNA

siRNAs of *hnRNP G-T* were obtained from Bioneer Inc. (Daejeon, Republic of Korea) or Hokkaido System Science (Hokkaido, Japan). The following siRNA sequences were generated to suppress the expression of *hnRNP G-T*: sense siRNA of hnRNP G-T #1, CAACAGUGGAAUACUAUUAU (dTdT); anti-sense, AUAUAGUAUCCACUGUUG (dTdT); sense siRNA of #2,

UUAGUUUCGUUGAAAAGGGAU (dTdT); anti-sense,

CCCUUUUCAACGAAACUAACA(dTdT).

2.3 Tissue samples of CRC

CRC specimens (n=18) and adjacent normal tissues (n=18) were obtained from 18 patients who received colonoscopy in our hospital. Total RNA was collected from the samples using an RNeasy mini kit (Qiagen, Venlo, Netherlands) according to the manufacturer's instructions. This study was conducted with the understanding and written informed consent of all participants.

2.4 Western blotting

Cells were lysed in NP-40 Cell Lysis buffer (ThermoFisher Scientific) containing cOmplete™ Protease Inhibitor Cocktail (Merck) and degenerated in Laemmli Sample Buffer containing 2-mercaptoethanol at 95°C for 5 min. Equal amounts of protein were loaded onto SDS-PAGE (12.5%), transferred to a nitrocellulose membrane at 100V for 60 min. Non-specific binding of primary antibody was blocked using SuperBlock T-20 (PBS; ThermoFisher Scientific) for 1 h. The following primary antibodies were diluted to 1:1000 in SuperBlock T-20 (PBS) and incubated with membranes overnight at 4°C.

The primary antibodies: hnRNPG-T (Abcam; ab175228), ZDHHC11 (Abcam;

ab69042), cleaved poly-ADP-ribose polymerase (PARP) (Cell Signaling Technology, Inc., MA, USA, #5625), cleaved caspase-3 (Cell Signaling Technology, #96615625), phosphor-ATM (Cell Signaling Technology, #5883), ATM (Cell Signaling Technology, #5883), phosphor-ATR (Cell Signaling Technology, #30632), ATR (Cell Signaling Technology, #5883), phosphor-ERK (Cell Signaling Technologies; #4370), ERK (Cell Signaling Technology, #5883). Unbound primary antibody was removed in 0.05% Tween20-PBS (T-PBS), and the membranes were incubated with HRP-conjugated secondary antibodies (R&D Systems, Inc., MN, USA). The blots were visualized using a Super Signal West Pico enhanced chemiluminescence system (ThermoFisher Scientific) after washing with T-PBS. The expression was Actin (BD Transduction Laboratories; 612656, KY, USA) was used for normalization of protein expression.

2.5 Real-time PCR

Total RNA was isolated using a RNeasy mini kit (Qiagen, Venlo, Netherlands) according to the manufacturer's instructions. cDNA was generated using a high-capacity cDNA RT kit (ThermoFisher Scientific). The spectrum of the Ct value was monitored by an Applied Biosystems 7300 Real-Time PCR system and using Taqman

gene expression assays (HNRNPG-T; Hs01059791, ZDHHC11; Hs00227137) in duplicate.

2.6 RNA immunoprecipitation

HCT116 cells were dissolved in NP-40 cell lysis buffer (ThermoFisher Scientific) supplemented with a complete protease inhibitor cocktail (Merck) and RNasin (Promega Corporation, WI, USA). The cell lysates were clarified by centrifugation at 21,500×g for 10 min. The RNAs that form a complex with hnRNP G-T were enriched using hnRNP G-T antibody or isotype control with a Dynabeads immunoprecipitation kit (VERITAS Corporation, CA, USA). The RNAs were isolated from the precipitants with phenol–chloroform extraction and purified using a mirVana™ Isolation Kit (ThermoFisher Scientific). A whole transcriptome analysis using a Proton semiconductor sequencer was performed to exhaustively identify the mRNAs that bound with hnRNP G-T. The binding of hnRNP G-T and mRNAs was confirmed by RT-qPCR.

2.7 Sulforhodamine B (SRB) assay

The cells, which were treated with each siRNA the by reverse-transfection method using RNAiMAX reagent, were plated in 96-well microplates at 1.0×10^4 cells/well.

The SRB assay was subsequently performed according to the method reported by Vichai and Kirtikara [15].

2.8 Xenografts

The posterior flank of 6–8-week-old male BALB/c nude mice was subcutaneously injected with HCT116 cells (2×10^6 cells). *hnRNP G-T* siRNA or scramble siRNA was administered daily with a GENOMONE-Si transfection kit (Ishihara Sangyo, Co, Ltd., Osaka, Japan) into the transplanted tumor via local injection.

2.9 The mouse model of AOM–DSS carcinogenesis

BALB/c male mice (age: 6–8 weeks) were treated with Azoxymethane (AOM; 10 mg/PBS/kg; Wako Pure Chemicals) via intraperitoneal injection, at one week after the injection of AOM, the mice were given 1% (wt/vol) dextran sulfate salt (DSS) (MP Biomedicals, LLC., CA, USA) in drinking water for 1 week. Tumorous tissues were collected at day 63 and lysed in NP-40 Cell Lysis Buffer.

2.10 Immunohistochemistry

After deparaffinization and rehydration, endogenous peroxidase activity was blocked with 0.6% H₂O₂ in ethanol for 25 min. The slides were then treated by the

antigen-retrieval technique with autoclaving in 10 mM citrate buffer (pH 9.0) for 20 min at 121°C. After blocking any nonspecific reaction with SuperBlock™ (PBS) Blocking Buffer (Thermo Fisher Scientific), the sections were incubated with anti-hnRNP G-T antibody (SantaCruz, Dallas, TX, U.S.A. ; sc-101134) at 4°C overnight. This step was followed by sequential incubation with the secondary antibody (ImmPRESS UNIVERSAL Reagent, Anti-Mouse/Rabbit Ig) (VECTOR LABORATORIES, INC., Burlingame, CA, U.S.A.) for 1 h at room temperature and stained using a DAB Peroxidase Substrate Kit, ImmPACT (VECTOR LABORATORIES). Nuclei were stained with hematoxylin.

2.11 Immunocytochemistry and TUNEL staining

HCT116 cells were plated on Lab-Tek glass chamber slide (ThermoFisher Scientific) and were fixed with 4% paraformaldehyde overnight at 4°C. The cells were washed with PBS, permeabilized with 0.1% Triton X-100 and blocked in 3% BSA in PBS. The slides were then sequentially incubated with primary antibodies (Ki-67 [Novus, NB500-170]) overnight at 4 °C, washed with PBS, and then incubated with Alexa 488-conjugated secondary antibodies (ThermoFisher Scientific) for 1 h at room temperature. The nuclei were counterstained with 4',6-Diamidino-2'-phenylindole

dihydrochloride (DAPI) (Sigma Aldrich). TUNEL assays were performed with an In Situ Cell Death Detection Kit and TMR red (Roche Diagnostic, IN, USA) according to the manufacturer's instructions. The cells were mounted with an anti-fade mounting medium, and the immunofluorescence was visualized using a fluorescence microscope (KEYENCE Corporation, Osaka, Japan).

2.12 Transcriptome analyses using a Proton semiconductor sequencer

Transcriptome analyses using a Proton semiconductor sequencer were performed as previously described [10].

2.13 Transcriptome analysis using a Novaseq 6000 sequencer

HCT116 cells were transfected with scramble or *ZDHHC11* siRNAs ($n = 3$). Agarose gel electrophoresis verified the RNA integrity and libraries were generated using an NEBNext Ultra II RNA Library Prep Kit (Illumina®). Sequencing was performed at Veritas Genetics (Danvers, Massachusetts, USA) using a Novaseq 6000 (Illumina®). An expression analysis of each sample was imported into the CLC Genomics Workbench software program (CLC bio, Aarhus, Denmark). An unpaired *t*-test determined the significance of the differences among the samples. The MetaCore software program performed the signal pathway and gene ontology (GO) analysis.

2.14 Actinomycin D chase experiment

HCT116 cells were transfected with scramble or *hnRNP G-T* siRNAs (n=3). After transfection for 24 h, the cells were treated with actinomycin D (2 μ g/ml). Total RNA was extracted at the indicated time points (0, 2 and 6 h). *ZDHHC11* mRNA levels were analyzed by RT-qPCR.

2.15 Plasmid DNA and transfection

HCT116 cells were transfected with control vector (pCMV6-AC-GFP vector), or *ZDHHC11* plasmid (ORIGENE, RG204383) and scramble or *hnRNP G-T* siRNAs (n=3) using Lipofectamine3000 reagent (ThermoFisher Scientific) according to the manufacturer's instructions.

2.16 Data assessment and presentation

The error bar and numbers show the S.D. Significance was assessed by Student's *t*-test and P-values of <0.05 were considered to indicate statistical significance.

3. Results

3.1 The knockdown of *hnRNP G-T* exerted anti-tumor effects in CRC.

First, to evaluate the tumor-promoting effects of hnRNP G-T, siRNA of *hnRNP G-T #1* was transfected into non-cancerous colorectal epithelial cells (HCEC-1CT), CRC cells (HCT116 and SW480) and pancreatic cancer cells (SUIT-2), and an SRB assay determined the cell growth (Fig. 1A). A significant growth suppression effect was detected in cancer cells (HCT116, SUIT-2 and SW480), but not in non-cancerous cells (HCEC-1CT), transfected with the siRNA of *hnRNP G-T #1 and #2* in comparison to cells with scrambled RNA (Fig. 1A). The cell growth was significantly reduced when 2 independent siRNAs of *hnRNP G-T* were transfected into HCT116, SW480 and SUIT-2 cells (the transfection efficacy is shown in Fig 1B, C), indicating that the growth changes were not caused by off target effects. siRNA of *hnRNP G-T #1* was used for all subsequent experiments. To assess whether hnRNP G-T has growth supportive functions *in vivo*, HCT116 cells were transplanted to the back of nude mice and siRNA of *hnRNP G-T* was induced to the transplanted tumor. The tumor size of the *hnRNP G-T* siRNA group was significantly smaller in comparison to the Scramble group (Fig. 1D), suggesting that hnRNP G-T has oncogenic properties in CRC cells *in vivo*.

3.2 hnRNP G-T was augmented in CRC.

To investigate whether hnRNP G-T was highly induced in colorectal cells, the expression of hnRNP G-T was compared between cancer and non-cancerous cells. RT-PCR and Western blotting revealed the overexpression of *hnRNP G-T* mRNA and protein in tumorous cells (HCT116, SW480 and SUI-2) in comparison to non-tumorous cell (HCEC-1CT) (Fig. 2A and 2B). Western blotting showed that hnRNP G-T is increased in the colorectal cancerous tissue of azoxymethane (AOM)/dextran sodium sulfate (DSS) carcinogenesis model in comparison to the normal colorectal epithelia of control mice (Fig. 2C). Immunohistochemistry showed the augmentation of hnRNP G-T in cancerous tissue of the AOM/DSS mouse model (Fig.2D). RT-PCR using specimens obtained from 18 CRC tissues and 18 adjacent normal colorectal tissues showed that *hnRNP G-T* mRNA was augmented in specimens of human cancerous lesions in comparison to non-cancerous lesions (Fig. 2E).

Immunohistochemistry indicated that hnRNP G-T is induced in human CRC tissue (Fig.2F). These suggested that hnRNP G-T was aberrantly overexpressed in CRC.

3.3 hnRNP G-T promoted cancer cell growth and inhibited apoptosis.

To investigate the influence of the downregulation of hnRNP G-T on cell growth ability, immunocytochemistry of Ki-67 and TUNEL staining were assessed. The Ki-67-

positive cells was markedly decreased by *hnRNP G-T* siRNA treatment (Fig.3A). The TUNEL-positive cells in cells treated with siRNA of *hnRNP G-T* was significantly higher in comparison to cells treated with scrambled RNA (Fig. 3B). Likewise, Western blotting of anti-cleaved PARP and anti-cleaved caspase-3, which are parameters of apoptosis [16-18], showed that the expression of cleaved caspase-3 and cleaved PARP were significantly augmented in *hnRNP G-T*-knockdown cells in comparison to control cells (Fig. 3C). These data indicated that hnRNP G-T promoted cell growth and inhibited apoptosis, and thereby exhibited oncogenic properties in CRC cells.

3.4 hnRNP G-T upregulated *ZDHHC11* mRNA and promoted cell growth and *ZDHHC11* was highly expressed in CRC.

To reveal mRNAs bound with hnRNP G-T in CRC cells, RNA-immunoprecipitation using hnRNP G-T antibody combined with a whole transcriptome analysis was performed in HCT116 cells. The transcriptome analysis with immunoprecipitated RNAs showed that 3212 mRNAs bound directly to hnRNP G-T (value of fold change; > 4, p <0.01) (Table S1). To identify mRNAs regulated by hnRNP G-T, total RNA was collected from hnRNP G-T knock-down cells, and then a transcriptome analysis was performed. This showed that 1941 mRNAs were

significantly decreased in hnRNP G-T-downregulated cells (absolute value of fold change, >4 , $p < 0.01$) (Table S2). RNA-immunoprecipitation using hnRNP G-T antibody combined with a transcriptome analysis and a transcriptome analysis using hnRNP G-T knock-down cells suggested that the expression of 223 mRNAs was directly regulated by hnRNP G-T. The molecular functions of these 223 mRNAs were then searched by a GO analysis. One hundred seventy-four genes, the functions of which have already been reported, were selected for the following experiments (Table S3). In the 174 genes, the top 5 mRNAs of the IP-transcriptome assay (*FAM156*, *LRRC56*, *MAPK15*, *SV2A* and *ZDHHC11*) were subsequently evaluated. To evaluate whether hnRNP G-T promoted tumor cell growth mediating the 5 mRNAs, these mRNAs were knocked down with the siRNA for each mRNA and cell growth was assessed. The SRB assay showed strong growth inhibition in HCT116 cells transfected with the siRNAs of both *ZDHHC11* (*Gene symbol: ZDHHC11*) #1 and #2 in comparison to cells with scrambled RNA (Fig. 4A). In contrast, the downregulation of *ZDHHC11* had no effect on the cell growth in non-tumorous HCEC-1CT cells (Fig. 4B). The knockdown efficacy of siRNA of *ZDHHC11* of each cell is shown in Fig. 4C and 4D. RNA-immunoprecipitation combined with RT-PCR confirmed the direct binding of hnRNP G-T and *ZDHHC11* mRNA in HCT116 cells (Fig. 4E). To reveal

whether hnRNP G-T stabilized *ZDHHC11* mRNA directly, the expression of *ZDHHC11* was assessed in hnRNP G-T-downregulated cells. RT-PCR and Western blotting showed that the mRNA and protein expression of *ZDHHC11* was decreased in HCT116 cells and HCEC-1CT cells transfected with siRNA of *hnRNP G-T* (Fig. 4F and 4G, Fig. S1A and S1B). To confirm the *ZDHHC11* mRNA stabilization by hnRNP G-T, actinomycin D (which inhibits the generation of mRNA) was applied on hnRNP G-T downregulated cells. RT-PCR showed the downregulation of *ZDHHC11* in actinomycin D treated hnRNP G-T downregulated cells (Fig 4H). To assess whether tumor cell growth was recovered by the overexpression of *ZDHHC11* in hnRNP G-T downregulated cells, the expression vector of *ZDHHC11* and siRNA of *hnRNP G-T* were co-transfected to HCT116 cells. An SRB assay revealed that the growth suppression mediating hnRNP G-T downregulation was almost recovered by the overexpression of *ZDHHC11* (Fig 4I, the expressional analysis of *ZDHHC11* is shown in Fig. S2A). These data suggest that hnRNP G-T stabilized the *ZDHHC11* mRNA, and thereby promoted the progression of CRC.

To assess the abnormal expression of *ZDHHC11* in colorectal cells, the expression of *ZDHHC11* was compared between cancer and non-cancerous cells. RT-PCR and Western blotting showed the overexpression of the mRNA and protein of

ZDHHC11 in tumorous cells (HCT116) in comparison to non-tumorous cell (HCEC-1CT) (Fig 5A, B). Furthermore, the overexpression of *ZDHHC11* mRNA (in comparison to non-cancerous lesions) was confirmed in specimens of human cancerous lesions (Fig. 5C). To investigate the correlation of the *hnRNP G-T* and *ZDHHC11* expression, we compared the expressional profiles of these two genes. The correlation coefficient was 0.449 (p=0.06, n=18) (Fig.5D), suggesting that the expression of *hnRNP G-T* tends to be correlated with the expression of *ZDHHC11* mRNA in CRC.

3.5 ZDHHC11 promoted cell growth and inhibited apoptosis in CRC.

To confirm the cell proliferative and anti-apoptotic functions of ZDHHC11, Ki-67 staining and TUNEL assay were performed. The number of Ki-67-positive cells was markedly decreased with *hnRNP G-T* or *ZDHHC11* siRNA treatment (Fig.6A) and the number of TUNEL-positive cells in cells treated with *hnRNP G-T* or *ZDHHC11* siRNA was significantly higher in comparison to cells treated with scrambled RNA (Fig. 6B). Western blotting showed that the expression of cleaved caspase-3 and cleaved PARP was significantly augmented in *hnRNP G-T*- or *ZDHHC11*-downregulated cells (Fig. 6C). These data indicate that ZDHHC11 promoted cell growth and inhibited apoptosis in CRC.

3.6 hnRNP G-T-ZDHHC11 promoted cell growth by activating the ATM/ATR pathway and ERK1/2 in CRC.

To investigate the tumor-promotive mechanism of ZDHHC11 in CRC cells, we performed a transcriptome analysis in ZDHHC11-downregulated HCT116 cells. 1087 mRNAs were aberrantly expressed in ZDHHC11-downregulated cells (absolute value of fold change; >4 , $p < 0.05$) (Table S4). A signal pathway analysis indicated that the downregulation of ZDHHC11 in CRC was closely associated with the ATM/ATR pathway (Table S5 and Table S6). To confirm whether hnRNP G-T regulates the ATM/ATR pathway through the stabilization of *ZDHHC11* mRNA, the phosphorylation of ATM and ATR was assessed in hnRNP G-T- or ZDHHC11-knockdown CRC cells. Western blotting showed that dephosphorylation of ATM and ATR, but not their whole expression, was induced by the knockdown of hnRNP G-T or ZDHHC11 in HCT116 cells (Fig. 7A). Previous investigations showed that the ATM/ATR pathway was positively regulated by ERK signal transduction [19, 20]. Western blotting showed the downregulation of phosphorylated ERK1/2 by the knockdown of hnRNP G-T or ZDHHC11 in HCT116 cells (Fig. 7B). These findings suggest that hnRNP G-T activates the ATM/ATR/ERK pathway through the stabilization of *ZDHHC11* mRNA, and thereby promotes the progression of CRC.

4. Discussion

In this study, we demonstrated that hnRNP G-T, which is specifically expressed in the testis, was induced in CRC cells and that the inhibition of hnRNP G-T had a tumor suppressive effect. Likewise, hnRNP G-T supported cell growth and inhibited apoptosis by the direct stabilization of the tumor promotive *ZDHHC11* mRNA, and thereby promoted the progression of CRC. Importantly, the expression of *hnRNP G-T* mRNA and protein was correlated with the *ZDHHC11* mRNA and protein expression (Fig. 4D and 4E), and the growth of non-cancerous cells was not inhibited by the downregulation of hnRNP G-T. Therefore, hnRNP G-T may be an attractive therapeutic target for CRC.

Our SRB assay and xenograft study showed that the downregulation of hnRNP G-T significantly decreased the proliferation of cancer cells, but not non-cancerous cells. We demonstrated that hnRNP G-T, which is normally specifically expressed in the testis, is augmented in cancer cells and works as an oncogene. To utilize hnRNP G-T as a cancer treatment target, the toxicity of germ cells should be monitored because CRC develops in young as well as old population.

We demonstrated that hnRNP G-T bound directly to and stabilized *ZDHHC11* mRNA, thereby promoted the CRC cell growth. *ZDHHC11*, a poorly characterized

member of the palmitoyltransferase family [Human DHHC proteins: A spotlight on the hidden player of palmitoylation], is considered to be associated with the progression of several types of cancer, and the gain of the *ZDHHC11* coding region (5p15.33) in bladder cancer and non-small cell lung cancer, and *ZDHHC11* mRNA is targeted by the tumor suppressor microRNA, miR-150, in Burkitt lymphoma [21-23]. However, the association of *ZDHHC11* with CRC and the mechanism underlying its tumor proliferative functions have not been reported. Our SRB assay confirmed the inhibition of cell growth in HCT116 cells, but not in HCEC-1CT cells, by the knockdown of *ZDHHC11*. Interestingly, *ZDHHC11* mRNA expresses numerous cells, including gastrointestinal tract and testis whereas, the expression of *hnRNP G-T* mRNA and protein was testis-specific [24] (The expression data downloaded from Human Protein Atlas (www.proteinatlas.org) was added to Figure S5, S6). These data suggest that *hnRNP G-T-ZDHHC11* mRNA pathway works specifically in cancer cells and may be an attractive therapeutic target for CRC treatment.

It is well known that the ATM/ATR pathway is a key mediator of the DNA damage response (DDR), which regulates the cell functions, including the cell cycle and apoptosis, [25]. Recently, ATM and ATR inhibitors are highlighted as antitumor agents because numerous cancers, including CRC, utilize the ATM/ATR-associated DDR for

survival and drug resistance [26-30]. Interestingly, we showed that the downregulation of the hnRNP G-T-*ZDHHC11* mRNA pathway, which was highlighted as upstream signaling of the ATM/ATR pathway by our transcriptome analysis, inhibited the growth suppression effect in cancer cells, but not in non-cancerous cells, suggesting that the antitumor effects of ATM/ATR signaling targeted therapy may be achieved by targeting hnRNP G-T or *ZDHHC11*, with fewer adverse events.

The RAS-RAF-MEK-ERK signal pathway is regarded as an important therapeutic target in CRC and has been widely studied [31, 32]. Previous reports showed that ERK signal transduction enhanced the ATM/ATR pathway, whereas ERK activation is also induced by DNA damage-induced checkpoint activation, including the ATM/ATR pathway [33-35]. Our Western blotting experiment showed that ERK signaling as well as ATM/ATR signaling was attenuated by the downregulation of hnRNP G-T and *ZDHHC11*, supporting that the hnRNP G-T-*ZDHHC11* pathway promoted tumor progression, which mediated the ATM/ATR signaling pathway. However, how *ZDHHC11* attenuates ATM/ATR/ERK signaling remains to be elucidated, because *ZDHHC11* is a member of the palmitoyltransferase family molecules which are not kinases. The molecular mechanism underlying the phosphorylation of ATM/ATR/ERK, which mediates *ZDHHC11*, should be

investigated for the hnRNP G-T-*ZDHHC11* pathway to be used as a therapeutic target in CRC.

The cleavage of PARP and caspase-3 was strongly induced by the downregulation of hnRNP G-T in comparison to the downregulation of *ZDHHC11*. An IP-transcriptome analysis revealed that hnRNP G-T bound with and regulated numerous mRNAs, including apoptosis-related mRNAs, as well as *ZDHHC11* mRNA, suggesting that the cancer progression pathway, which mainly regulates apoptosis, is regulated by hnRNP G-T in CRC cells. We also demonstrated that 223 mRNAs directly bound to hnRNP G-T. In the present study, we assessed the tumor promotive function of the top 5 mRNAs identified by RNA-immunoprecipitation and a whole transcriptome analysis. However, tumor promotive mRNAs, such as cyclin dependent kinase, were also stabilized by hnRNP G-T and can be associated with tumor cell growth. In fact, in HCT116 cells, the cleavage of caspase 3 and PARP was strongly induced by hnRNP G-T downregulation in comparison to *ZDHHC11* downregulation, suggesting that hnRNP G-T promotes the progression of CRC through the stabilization of several oncogenic mRNAs. Notably, we demonstrated that cell growth suppression of CRC mediating the downregulation of hnRNP G-T almost recovered with the overexpression of *ZDHHC11*, suggesting that *ZDHHC11* must be a major target mRNA of *hnRNP G-T*. Likewise, p-

ATM and p-ATR were decreased by the downregulation of ZDHHC11 as well as hnRNP G-T, suggesting that ZDHHC11 is key regulator of ATM/ATR signaling that mediates hnRNP G-T. Therefore, hnRNP G-T mediating the *ZDHHC11* mRNA pathway is a key pathway for the progression of CRC. However, the association between the remaining mRNAs and the tumor promoting effect of hnRNP G-T also needs to be examined.

In RT-PCR of clinical biopsy specimens, as shown in Fig. 1C, the expression *hnRNP G-T* showed individual differences in human CRC tissue, suggesting that the therapeutic effect may differ in each CRC patient when hnRNP G-T is used as a therapeutic target. To apply hnRNP G-T targeting therapeutics in CRC treatment, the development of biomarkers that are correlated with the effects of hnRNP G-T targeting therapy may be needed. Likewise, we confirmed the tumor suppressive functions in three cancer cell lines: HCT116, SW480 and SUI-2. A previous investigation demonstrated that these cell lines have mutations in cancer driver genes, including KRAS [36-41]. The influence of genetic mutation of cancer driver genes by the downregulation of hnRNP G-T in cancer cell treatment should be investigated.

In conclusion, we revealed that hnRNP G-T was abnormally expressed in CRC and that it promoted tumor growth in CRC through ZDHHC11-mediated

inhibition of apoptosis. Importantly, a growth inhibition effect induced by the reduction of hnRNP G-T was detected in cancer cells, but not non-cancerous cells. Thus, hnRNP G-T is an attractive therapeutic target for CRC.

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Data Availability Statement: The data sets used and analyzed during the current study are available from the corresponding author on reasonable request. The Human Protein Atlas data in Fig. S3 and S4 are available in structured XML format and can be downloaded from www.proteinatlas.org/about/download.

Figure legends

Figure 1. hnRNP G-T promotes cell growth in cancer cells, but not non-cancerous cells.

A An SRB assay showed significant cell growth in cancer cells (HCT116, SW480 and SUI-2), but not non-cancerous cells (HCEC-1CT) (n=5). **B, C** RT-PCR (**B**) and Western blotting (**C**) showed the knockdown efficacy of HCT116, SW480, SUI-2 and HCEC-1CT cells transfected with siRNA of *hnRNP G-T* #1 and #2 at 48 hours (n=3). **D** The size of the HCT116 xenograft tumor was measured daily (n=5).

Figure 2. hnRNP G-T is overexpressed in CRC.

A, B RT-PCR (**A**) and Western blots (**B**) showed that hnRNP G-T was augmented in HCT116, SW480 and SUI-2 cells in comparison to HCEC1CT cells (n=3). **C** Western blotting showed that hnRNP G-T was highly induced in the AOM-DSS carcinogenesis model (n=7-8). **D** Immunohistochemistry showed cancer cells positive for hnRNP G-T in the AOM/DSS mouse model. **E** RT-PCR showed the augmentation of *hnRNP G-T* in CRC tissues in comparison to the normal epithelium (n=18). **F** Immunohistochemistry showed cancer cells positive for hnRNP G-T in human CRC tissue.

Figure 3. hnRNP G-T promotes cell growth and inhibits apoptosis in CRC cells.

A Immunocytochemistry showed that ki-67 positive cells were reduced by the downregulation of hnRNP G-T. **B** TUNEL staining showed the augmentation of TUNEL-positive cells by the downregulation of hnRNP G-T. **C** Western blots showed the induction of cleaved PARP and caspase-3 in hnRNP G-T-knockdown cells.

Figure 4. The expression of hnRNP G-T is correlated with the expression of ZDHHC11 and ZDHHC11 was highly expressed in CRC.

A An SRB assay showed the cell growth of HCT116 cells by the downregulation of the top 5 mRNAs. The downregulation of ZDHHC11 was associated with the strong inhibition of cell growth in HCT116 cells (n=5). **B** The downregulation of ZDHHC11 showed no suppression of cell growth in HCEC-1CT cells (n=5). **C, D** RT-PCR (**C**) and Western blotting (**D**) showed the knockdown efficacy of HCT116 and HCEC-1CT cells transfected with siRNA of *ZDHHC11* at 24 hours (n=3). **E** RNA immunoprecipitation combined with RT-PCR confirmed the direct binding of hnRNP G-T and *ZDHHC11* mRNA (n=3) (**C**). **F, G** RT-PCR (**F**) and Western blots (**G**) showed that the *ZDHHC11* mRNA and protein expression were decreased in hnRNP G-T-downregulated HCT116

cells (n=3). **H** The actinomycin D experiment showed that hnRNP G-T stabilized the *ZDHHC11* mRNA in HCT116 cells (n=3). **I** The growth inhibition rate calculated by the SRB assay showed that growth suppression induced by hnRNP G-T downregulation recovered with the overexpression of *ZDHHC11*. The growth inhibition rate (%) = $[1 - (\text{OD}_{510 \text{ nm}} \text{ of each of the samples on day 3} - \text{OD}_{510 \text{ nm}} \text{ of each of the samples on day 1}) / (\text{OD}_{510 \text{ nm}} \text{ of Control on day 3} - \text{OD}_{510 \text{ nm}} \text{ of Control on day 1})] \times 100$.

Figure 5. ZDHHC11 is highly induced in CRC

A, B RT-PCR (**A**) and Western blots (**B**) showed that the *ZDHHC11* mRNA and protein expression were decreased in hnRNP G-T-downregulated HCTEC-1CT cells (n=3). **C** RT-PCR showed the augmentation of *ZDHHC11* in CRC tissues in comparison to the normal epithelium (n=18). **D** The mRNA expression of *ZDHHC11* tends to correlated with the expression of *hnRNP G-T* (n=18).

Figure 6. ZDHHC11 promoted cell growth and inhibited apoptosis in CRC.

A Immunocytochemistry showed that ki-67-positive cells were reduced by the downregulation of hnRNP G-T or *ZDHHC11*. **B** TUNEL staining showed that TUNEL-positive cells were augmented by the downregulation of hnRNP G-T or *ZDHHC11*. **C**

Western blots showed the induction of cleaved PARP and cleaved caspase-3 in hnRNP G-T or ZDHHC11-knockdown cells (n=3).

Figure 7. hnRNP G-T-ZDHHC11 promoted cell growth by activating the ATM/ATR pathway and ERK1/2 in CRC.

A, B Western blots showed that deactivation of phosphorylated ATM and ATR (**A**) in hnRNP G-T or ZDHHC11-knockdown cells (n=3) and the deactivation of phosphorylated ERK (**B**) in hnRNP G-T or ZDHHC11-knockdown cells (n=3).

Supporting information figure legends

Figure S1. The expression of hnRNP G-T is correlated with the expression of ZDHHC11T in HCEC-1CT cells

A, B RT-PCR (**A**) and Western blots (**B**) showed a decrease in the expression of *ZDHHC11* mRNA and protein in hnRNP G-T-downregulated HCEC-1CT cells (n=3).

Figure S2. The expression of ZDHHC11 in hnRNP G-T-downregulated HCT116 cells recovered with the induction of the *ZDHHC11* expression vector.

A Western blotting showed a decrease in the expression of ZDHHC11 protein in hnRNP G-T-downregulated HCT116 cells. The expression of ZDHHC11 recovered with the induction of the *ZDHHC11* expression vector (n=3).

Figure S3. The RNA expression of *hnRNP G-T*

hnRNP G-T is specifically expressed in the testis in non-cancerous tissues. The expression data were downloaded from the Human Protein Atlas (www.proteinatlas.org/ENSG00000170748-RBMXL2/tissue).

Figure S4. The RNA expression of *ZDHHC11*

ZDHHC11 is expressed in many kinds of organs. The expression data were downloaded from the Human Protein Atlas (www.proteinatlas.org/ENSG00000188818-ZDHHC11/tissue).

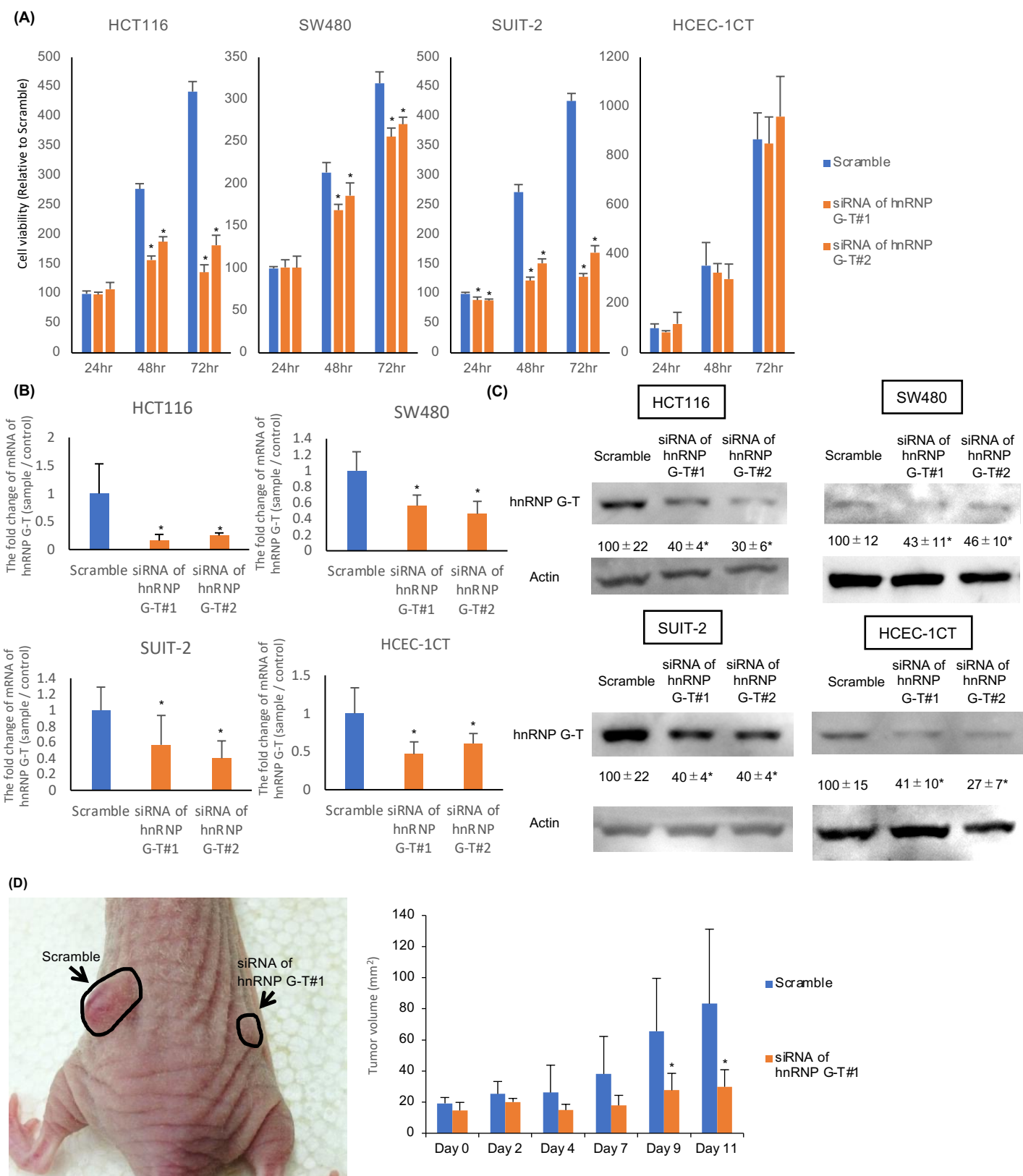


Figure.1

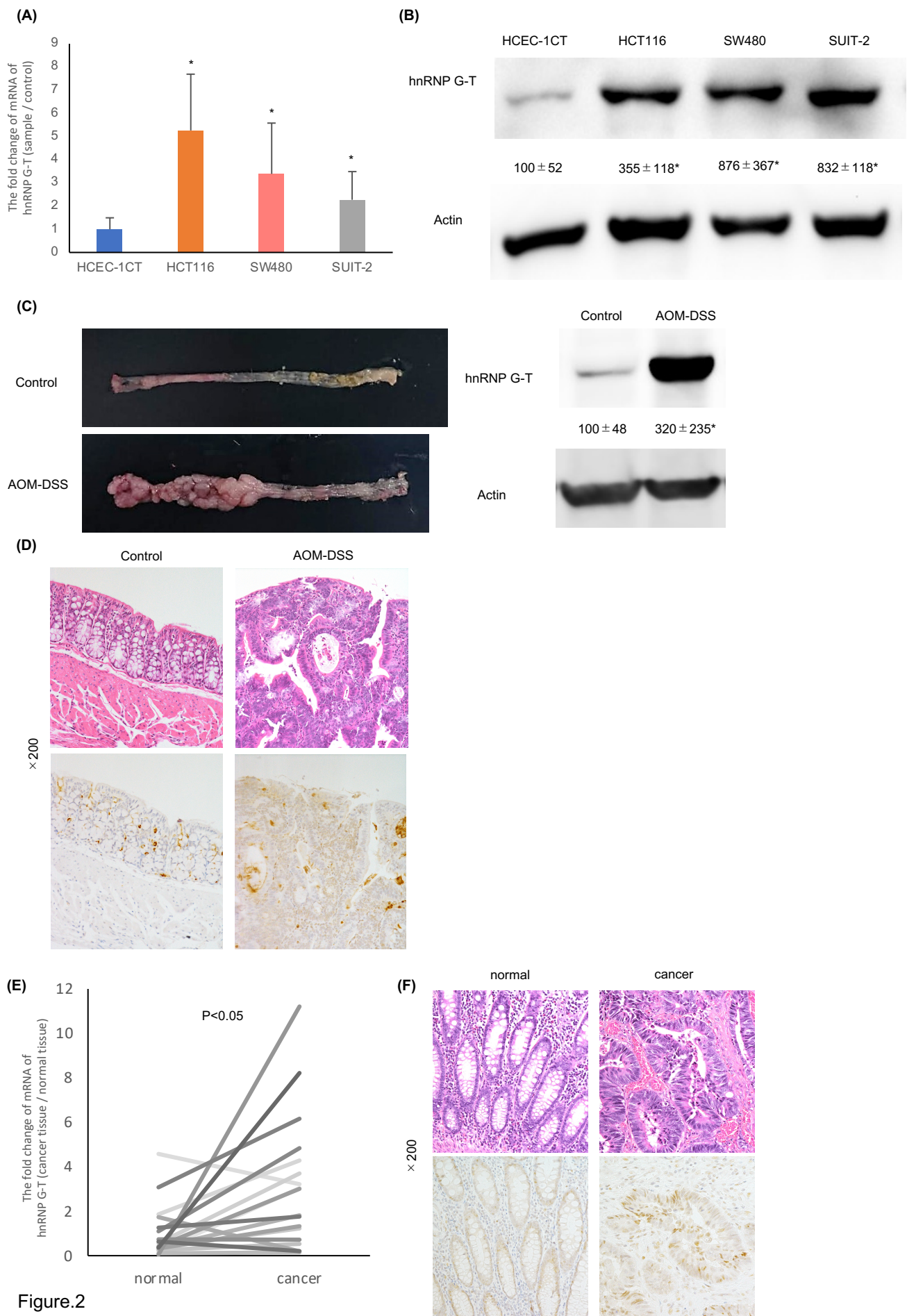


Figure.2

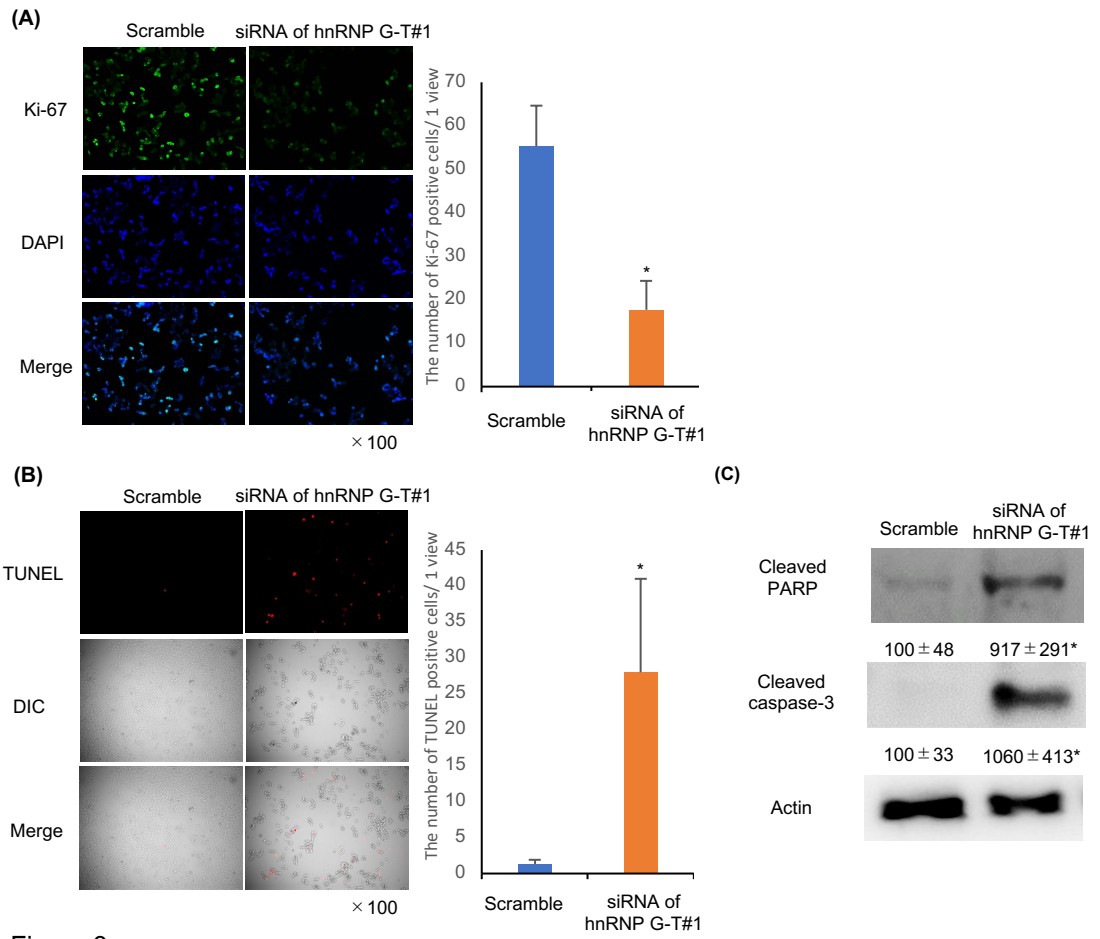


Figure.3

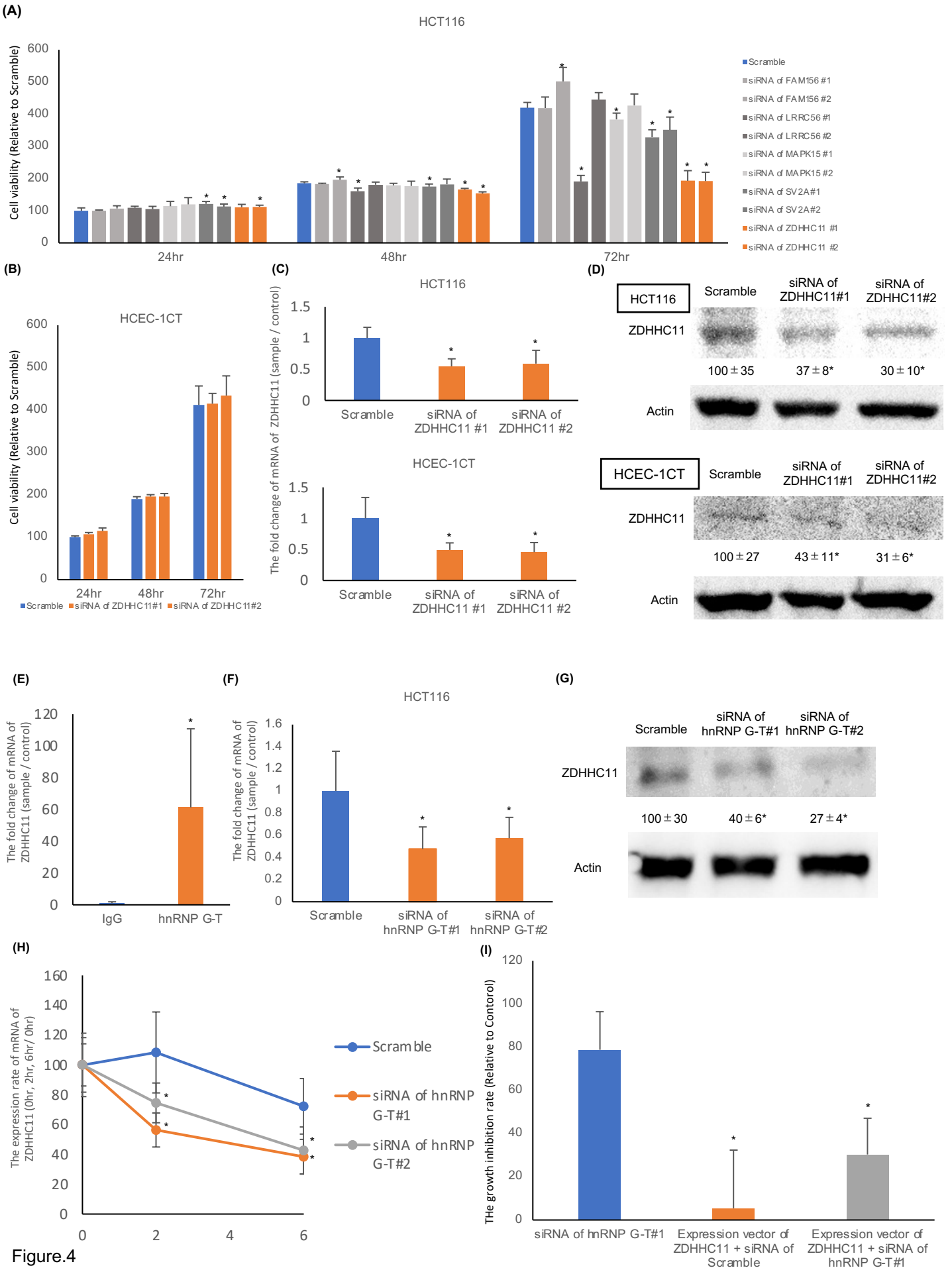


Figure.4

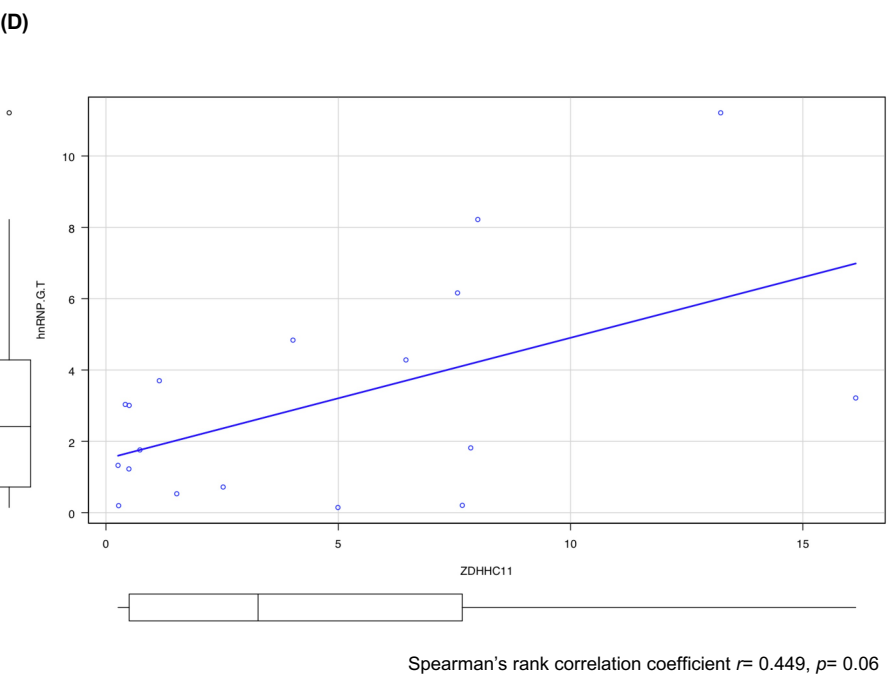
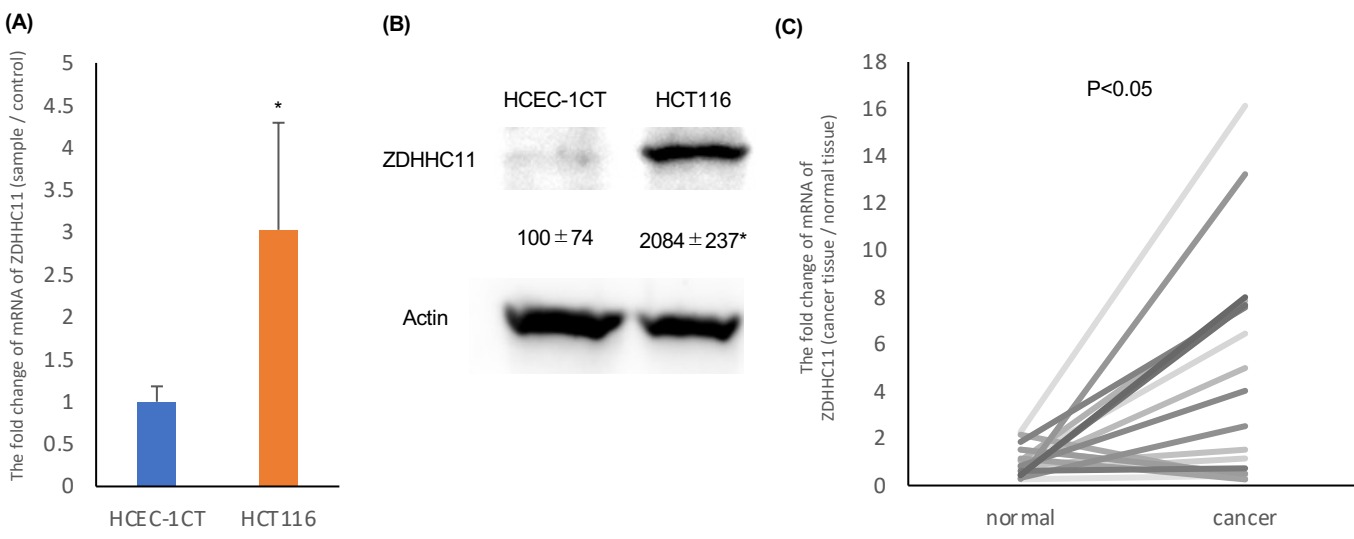


Figure.5

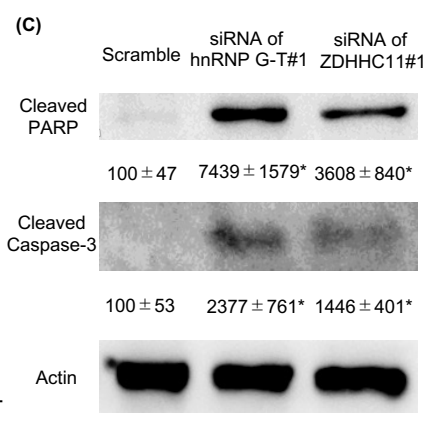
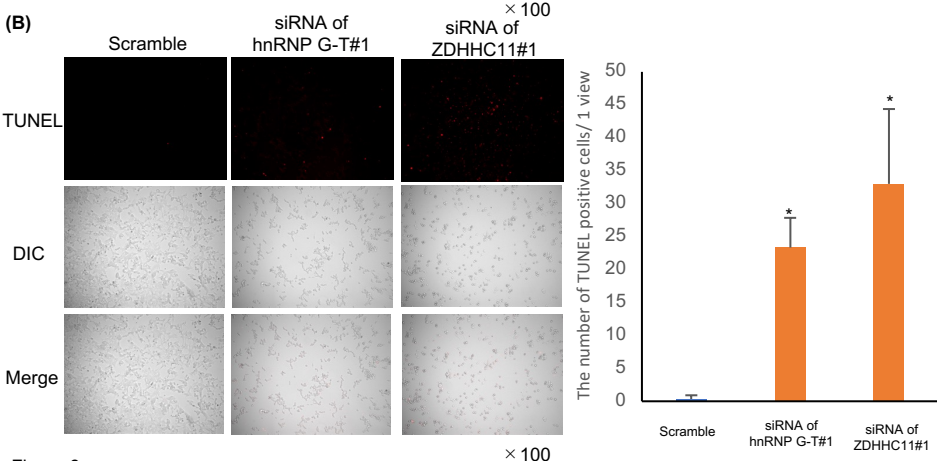
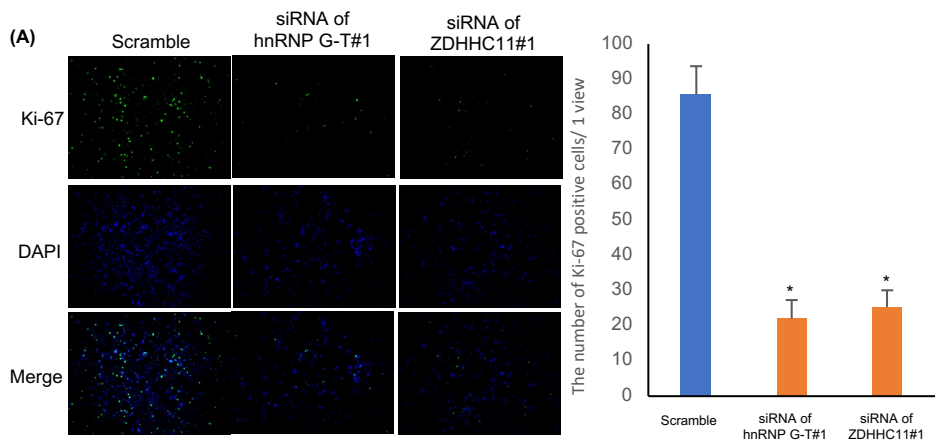


Figure.6

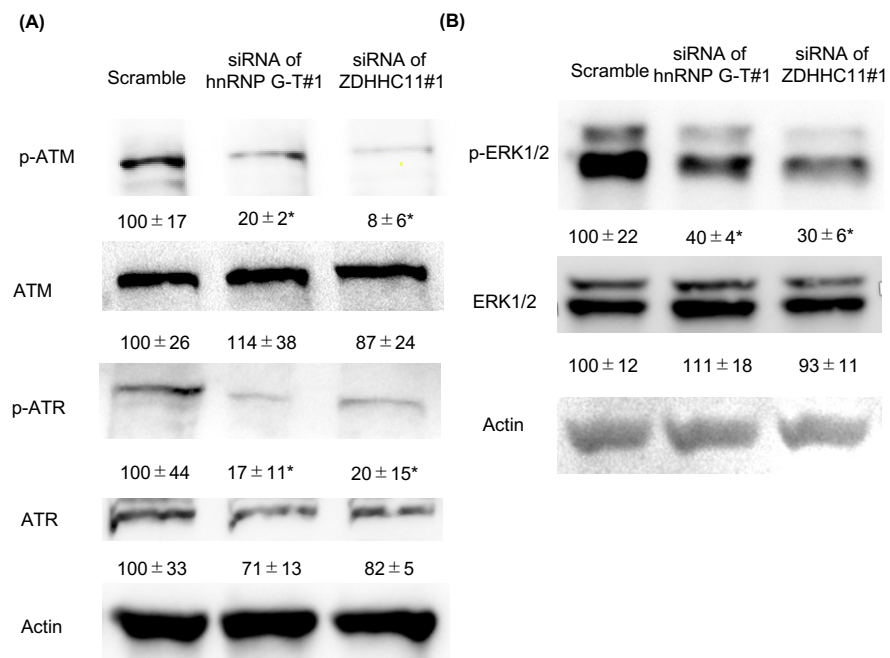


Figure.7

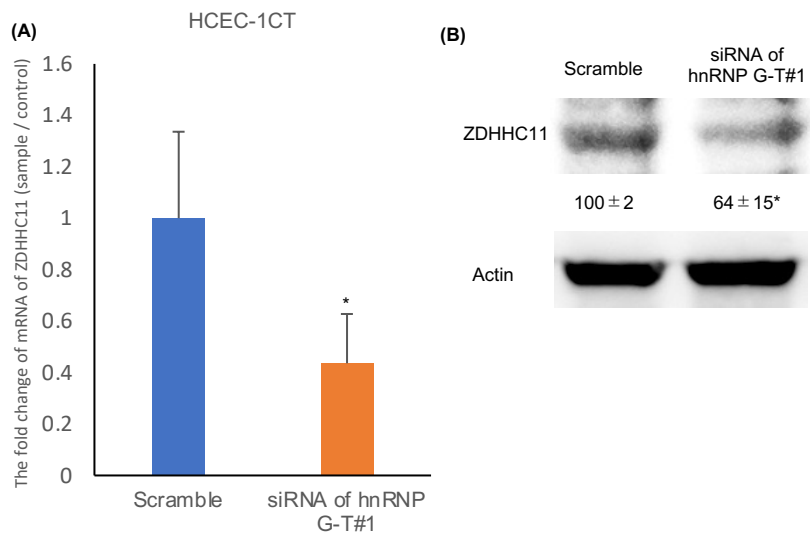


Figure.S1

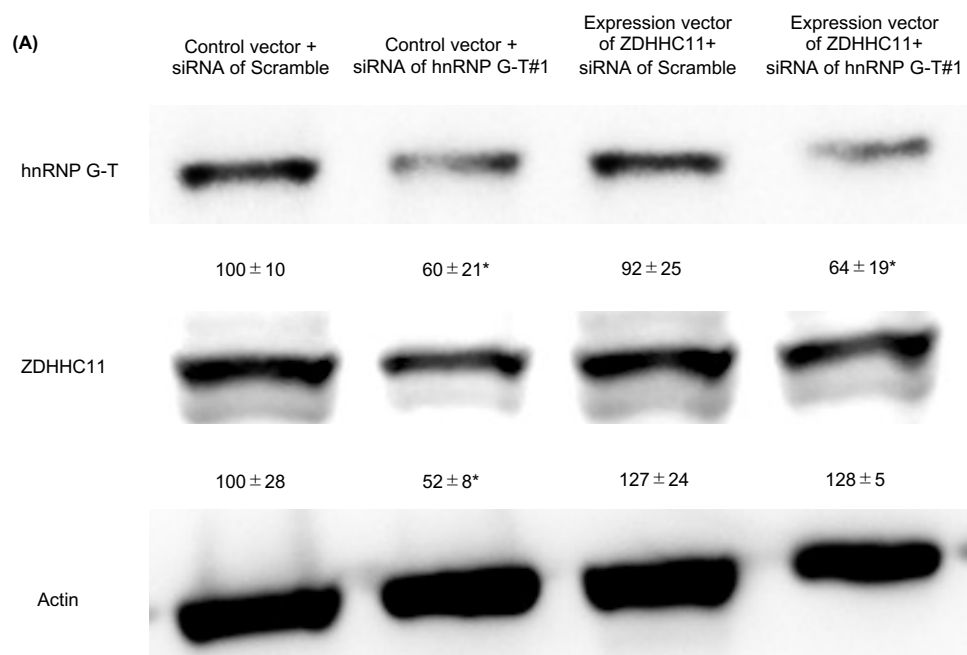


Figure.S2

RNA expression of hnRNP G-T

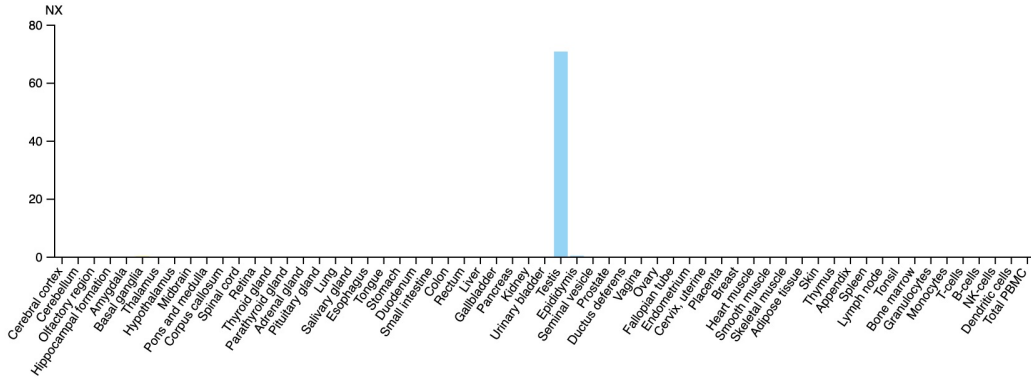


Figure.S3

RNA expression of ZDHHC11

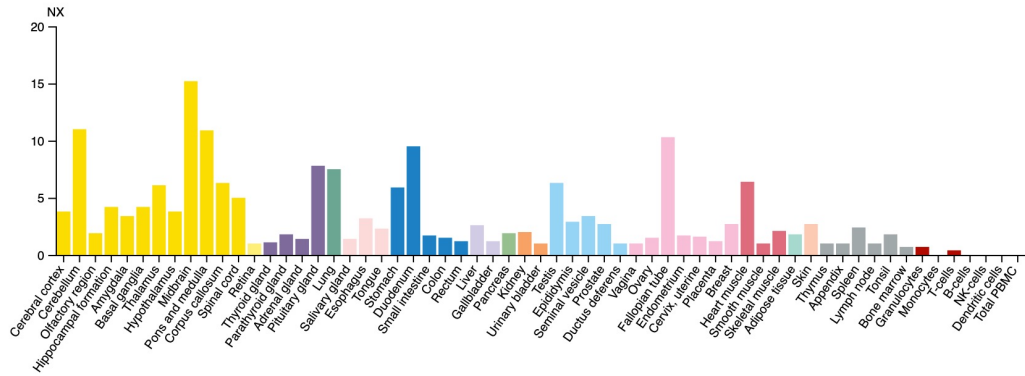


Figure.S4

Table S1. List of mRNAs directly bound to hnRNP G-T.

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
AACSP1	41.78	0.000386053
AADAC	19.53	0.004895321
AADAT	4.67	0.000190833
AAK1	4.19	0.001049111
AARS2	5.37	0.003607419
AASDH	7.33	0.001512918
AASS	12.93	0.000458306
ABC12-49244600F4.3	9.31	8.28164E-05
ABC7-42389800N19.1	6.39	3.73146E-06
ABCA2	5.10	0.003545883
ABCA5	4.99	0.00301267
ABCC2	6.30	5.53045E-05
ABCC5	4.95	0.0002934
ABCC6	4.42	0.005235346
ABCF1	4.10	0.002393138
ABHD13	5.45	0.00050929
ABHD3	4.66	0.00323252
ABI3BP	8.90	0.008895254
ABL2	5.98	0.003512908
AC004158.2	16.41	0.001183161
AC004893.11	9.43	0.004544042
AC005154.6	13.85	3.24531E-05
AC005324.8-001	7.40	0.002092146

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
AC005682.5	5.37	0.002462473
AC007283.5	5.50	0.007889309
AC009113.1	9.65	0.002036644
AC009120.6	5.05	0.002061224
AC009237.1	4.95	0.001385722
AC009404.2	6.91	0.007405983
AC009948.3	6.61	0.001152013
AC009948.5	10.14	0.000809335
AC011497.1	9.36	0.007608827
AC016725.4	26.03	0.005210857
AC018865.8	9.82	0.007321787
AC021218.2	4.04	0.007280056
AC024560.3	5.05	0.000454289
AC024937.6	18.47	0.008318128
AC027612.6	4.89	0.008977528
AC034193.5	21.90	0.001418671
AC034220.3	9.74	0.004290581
AC068138.1	7.58	0.00161842
AC069513.3	10.24	0.001453367
AC073236.3	6.91	0.005872416
AC074117.10	9.25	0.002863717
AC087650.2	7.56	0.008239248
AC093375.1	10.53	0.005662331

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
AC093627.10	10.50	0.005610614
AC093726.6	34.10	0.000173443
AC093838.4	4.07	0.002781206
AC110373.1	7.19	0.003827665
AC110491.1	6.98	0.000275407
AC114772.1	9.44	5.92354E-05
AC130352.1	4.79	0.002005909
AC135178.1	27.15	0.000870244
AC141586.5	10.93	0.001970735
ACACA	5.51	3.15357E-05
ACACB	5.36	1.78925E-05
ACAD10	4.49	2.4462E-05
ACAD8	5.33	0.000407633
ACADSB	4.08	0.003182912
ACAP2	4.24	4.03754E-05
ACBD3	4.04	0.001612565
ACER3	4.50	0.000328405
ACIN1	4.63	0.000103988
ACSS2	4.95	0.009770793
ACTR5	10.64	3.88349E-06
ACVR2B	6.36	0.007361125
ACYP1	4.10	0.001527444
ADAM22	5.46	0.001984477
ADAMTS14	7.12	0.001738622

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ADAMTS7	4.70	0.007765727
ADAMTSL4	12.57	0.002503318
ADARB1	4.88	0.00067191
ADC	7.78	0.000617847
ADCY6	5.40	0.00195666
ADPGK	5.88	0.000155954
AFF1	4.71	0.003178326
AFF4	5.34	0.001285075
AFG3L1P	6.56	0.002800916
AGAP4	8.85	0.003848384
AGAP6	7.22	6.50798E-05
AGAP7	10.50	0.007587676
AGAP8	6.75	0.001544055
AGAP9	9.24	0.000618399
AGBL3	18.90	0.001036504
AGFG1	4.04	0.001070723
AGGF1	5.62	7.18878E-05
AGL	5.14	0.004215112
AGPAT4	5.71	0.000413417
AGRN	4.09	0.000983868
AGTPBP1	5.37	0.000580215
AGXT2L2	6.41	3.47522E-05
AHCTF1	9.12	4.2889E-06
AHI1	7.34	0.000167975

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
AHNAK	7.55	2.43913E-05
AHNAK2	9.82	0.000384181
AHR	4.14	0.001527169
AHRR	5.63	0.002545124
AHSA2	7.35	0.000320107
AIM1	5.03	0.00870442
AIMP1	5.17	1.9396E-05
AKAP10	5.56	0.000934068
AKAP11	5.49	0.000879955
AKAP12	5.15	0.000686673
AKAP13	6.48	0.001161033
AKAP2	4.92	7.54559E-06
AKAP7	5.96	0.009014118
AKAP9	9.28	0.000141322
AL353791.1	17.31	0.000531126
ALAD	4.19	0.003909071
ALCAM	6.48	0.00040456
ALDH1L2	20.30	0.002204378
ALDH8A1	12.61	0.002778997
ALG11	4.52	0.00558435
ALG13	5.11	0.000871664
ALG1L	7.80	0.002576829
ALKBH8	7.67	3.13694E-05
ALMS1	11.00	8.54828E-06

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ALOX12P2	6.33	0.000115448
ALPK1	4.61	0.000460005
ALS2	4.27	0.000131769
AMOT	4.64	0.004103793
AMY2B	18.47	0.008316425
ANAPC1	4.39	0.001277256
ANK2	6.58	0.001706062
ANK3	4.16	0.001826723
ANKHD1	7.04	5.12361E-05
ANKIB1	5.77	0.000128902
ANKLE2	5.87	7.70315E-05
ANKRD10	6.60	0.000177494
ANKRD11	7.28	0.00149536
ANKRD12	13.05	9.21364E-05
ANKRD17	6.53	0.00017009
ANKRD18A	9.74	0.0010346
ANKRD19P	11.04	0.002747818
ANKRD20A5P	4.21	0.000497558
ANKRD26	8.33	4.14023E-05
ANKRD31	5.02	0.009507179
ANKRD32	8.32	0.000578078
ANKRD36	9.79	0.001152799
ANKRD36B	13.66	1.36406E-05
ANKRD36C	12.69	0.001154728

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ANKRD44	4.75	0.001771589
ANKRD49	6.44	0.00082992
ANKRD50	5.06	0.000373209
ANKS3	5.50	5.9386E-05
ANLN	4.66	0.000175829
ANO6	4.69	0.003976636
ANO8	5.04	0.004347065
ANO9	6.56	0.000170454
ANP32E	4.64	0.001582426
ANTXR1	6.08	0.002233206
AOC2	5.44	0.002236923
AOC3	4.24	0.001721771
AP1AR	4.79	0.002442194
AP1G2	4.62	0.000242605
AP3M2	6.06	0.000100306
AP4E1	4.19	0.003135328
AP5M1	4.60	0.001949421
APAF1	5.13	0.002181184
APC	12.24	0.000101597
APITD1	5.17	0.003911838
APPL1	5.54	2.18215E-05
AQR	5.26	0.003003023
ARAP2	6.52	0.004301932
AREG	4.06	0.000298268

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ARFGEF1	5.45	0.000574896
ARFGEF2	5.32	0.000665805
ARG2	4.07	0.005386402
ARGLU1	6.67	0.000127505
ARHGAP11A	4.85	0.000293878
ARHGAP11B	7.70	0.001510045
ARHGAP21	7.49	3.51134E-05
ARHGAP29	5.03	5.09971E-05
ARHGAP32	6.46	0.000146989
ARHGAP42	5.71	0.000260662
ARHGAP5	8.37	8.64649E-06
ARHGAP8	5.08	0.001176519
ARHGEF10	6.33	1.11007E-05
ARHGEF11	4.47	0.004491565
ARHGEF12	5.33	0.001159254
ARHGEF26	5.58	0.000827834
ARHGEF5	10.58	3.6322E-07
ARHGEF7	4.04	0.003744686
ARID1A	5.25	0.000774051
ARID1B	4.70	0.001787614
ARID2	6.67	0.000266626
ARID4B	6.40	0.000737996
ARID5B	4.22	0.000429581
ARL10	6.23	0.007571812

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ARL13B	4.11	0.001798721
ARL16	4.54	0.000634242
ARL17A	6.02	0.000356519
ARL17B	8.45	0.000524264
ARL5B	4.86	0.001469352
ARL6	5.50	0.004869373
ARMC2	5.52	0.003573771
ARMC3	9.46	0.007998225
ARMC8	6.10	4.02745E-05
ARMCX3	4.58	0.000134268
ARNTL2	4.02	0.000301176
ARRDC3	4.15	0.004209264
ARVCF	4.62	0.001227955
ASAH2B	4.06	0.002395902
ASAP1	5.64	7.05038E-05
ASCC3	7.08	0.000619962
ASH1L	7.49	0.0008376
ASPM	10.46	7.86557E-06
ASTE1	5.18	0.004180922
ASUN	4.50	0.001421981
ASXL2	5.93	0.001566952
ATAD2	5.16	0.000524484
ATAD2B	4.89	0.001045604
ATAD5	12.60	3.98457E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ATF6	4.19	2.66107E-05
ATF7IP	5.05	0.000102613
ATG10	4.46	0.001363945
ATG12	6.79	0.000124693
ATG14	4.15	0.001978323
ATG16L2	5.99	0.001671435
ATG2B	6.97	0.003269424
ATG3	4.34	2.64991E-05
ATG4C	4.05	0.009412179
ATM	8.62	0.000327673
ATP11A	6.00	0.000996522
ATP11B	4.60	0.001289675
ATP11C	4.90	0.000939808
ATP2B1	4.41	0.000489461
ATP6AP1L	5.85	0.001206324
ATP6V1C1	4.10	0.002443352
ATP6V1E2	12.18	0.002703097
ATP7A	4.59	0.00125934
ATP8B1	5.84	0.006942825
ATP8B4	6.40	0.00617396
ATP9B	4.12	0.002801878
ATR	7.10	0.000406795
ATRX	8.52	0.000172385
ATXN2	7.04	4.07848E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ATXN7	5.41	1.0908E-06
AUH	5.63	0.003325646
B3GALNT2	4.04	0.001758684
B3GNTL1	4.50	0.003327692
B4GALNT1	4.20	0.002568708
B4GALT6	4.20	0.005491057
BACE1	4.09	0.009617942
BAHCC1	5.80	0.002269698
BANK1	14.34	0.003448928
BAZ1A	5.95	0.001234815
BAZ1B	4.94	0.001068626
BAZ2B	6.46	0.000397484
BBS10	5.44	0.000453804
BBS12	4.85	0.008836264
BBS4	4.62	3.08392E-05
BBS7	5.50	0.003797081
BBX	5.84	3.17098E-05
BCAM	4.02	0.000523569
BCCIP	4.26	0.000195795
BCL2L11	5.28	0.000138421
BCL9	4.95	0.009021695
BCLAF1	5.81	0.000105025
BCOR	6.30	0.001430495
BCS1L	4.74	0.000190188

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
BDNF-AS	11.05	0.005770419
BDP1	8.12	2.21267E-05
BEND6	19.82	0.001445886
BEND7	4.54	0.000708011
BIRC2	4.29	0.000315956
BIRC6	9.08	7.79718E-05
BIVM	5.56	0.005089968
BLM	6.16	0.000907213
BLZF1	5.31	0.000426286
BMP2K	7.01	6.42459E-06
BMP6	5.56	0.007580286
BMPR2	6.93	0.004545341
BMS1	4.66	0.000760768
BOD1L1	9.62	2.5308E-07
BPTF	8.04	5.84531E-06
BRAF	4.40	0.005995558
BRAP	5.36	1.39411E-05
BRCA1	6.20	0.00054036
BRCA2	10.73	1.05535E-05
BRCC3	9.51	0.002531692
BRD7	4.72	9.27966E-05
BRD8	5.57	0.000268093
BRD9	4.74	0.000180845
BRIP1	6.08	6.23526E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
BRMS1L	6.93	0.000297915
BRPF1	4.65	0.000106761
BRWD1	8.33	2.77366E-06
BRWD3	8.27	2.52671E-05
BSDC1	4.29	0.000380014
BSN	7.58	0.005452952
BTA1F1	6.95	1.06612E-05
BTBD19	35.82	0.000126895
BTBD7	4.13	0.000130663
BTC	8.63	0.003236806
BTN2A3P	7.10	0.00100857
BTN3A1	5.92	9.26527E-05
BTN3A3	8.69	0.007436219
BTNL9	7.29	0.006648738
BUB1B	4.29	0.000225277
BX248398.1	7.11	0.001015613
BX322557.10	4.57	0.008167118
C10orf118	8.14	0.000218176
C10orf12	6.38	0.000530875
C10orf137	4.87	0.000388732
C10orf88	6.28	0.000759505
C11orf30	8.78	8.05477E-05
C11orf63	6.13	0.003562274
C11orf80	4.05	0.006337728

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
C11orf82	11.61	0.002129052
C12orf29	4.37	3.745E-06
C12orf35	12.33	5.84954E-05
C12orf4	5.44	6.62745E-06
C12orf51	7.57	0.001968077
C14orf101	5.47	0.006644535
C14orf102	5.26	0.000658986
C14orf118	12.05	0.000132441
C14orf135	7.21	2.53917E-05
C14orf149	7.54	0.00741876
C14orf37	8.13	6.61171E-05
C14orf79	4.64	0.007145353
C15orf29	6.68	0.000520453
C15orf41	5.83	0.007009477
C15orf42	6.51	0.00088685
C16orf52	8.79	6.1547E-05
C16orf88	6.49	6.99515E-05
C17orf49_2	10.50	0.005610614
C17orf56	4.87	0.00452473
C17orf57	15.63	0.001977736
C17orf65	7.03	0.0045056
C17orf67	5.83	0.001817575
C17orf80	6.62	3.11747E-05
C19orf44	6.30	0.005043051

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
C19orf66	9.17	0.002443223
C1GALT1	6.32	0.000264889
C1orf112	5.93	0.000103128
C1orf131	7.36	0.000123854
C1orf162	10.50	0.005610614
C1orf170	10.50	0.005610614
C1orf27	11.91	1.11625E-05
C1orf31	4.16	0.004439097
C1orf35	5.01	0.000255838
C1orf61	6.49	0.000969124
C1orf63	8.29	0.000723754
C1orf9	4.13	0.002263196
C1QTNF6	6.12	0.006960065
C20orf194	6.73	0.000239595
C21orf59	5.18	0.001533922
C22orf34	5.50	0.000767182
C22orf46	11.93	0.001967649
C2CD2	4.23	3.5078E-06
C2CD3	6.42	8.76657E-05
C2orf56	8.33	0.002156872
C2orf63	6.73	0.001434612
C2orf82	4.96	0.000272789
C2orf88	7.32	0.003436998
C2orf89	6.57	0.000408899

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
C3orf17	5.80	0.001179246
C3orf19	4.80	0.008397461
C3orf26	4.32	0.000519931
C3orf35	13.36	0.005763664
C3orf62	6.24	0.000450289
C3orf67	10.78	0.004636086
C4BPAP1	12.27	0.000150032
C4orf19	19.17	0.001191385
C4orf21	7.34	0.000103663
C4orf29	5.40	0.000193786
C5orf24	4.28	0.008594568
C5orf28	4.47	0.003834576
C5orf34	6.00	0.000179654
C5orf4	6.38	0.004026567
C5orf42	9.37	3.77666E-05
C5orf43	4.06	1.30328E-05
C5orf45	10.04	0.000553
C5orf54	4.93	0.008142514
C6orf141	9.55	0.000711569
C6orf164	17.12	0.001993848
C6orf170	7.38	0.000117237
C6orf195	18.47	0.008318128
C6orf70	4.26	2.40763E-05
C7orf43	4.72	0.000472623

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
C7orf44	5.69	0.000473349
C9orf100	4.64	0.004274895
C9orf174	6.91	0.002096163
C9orf72	5.87	0.000710799
C9orf84	9.11	0.005147441
CA5B	7.21	0.001667742
CA5BP1	25.55	0.000238095
CACNB1	9.30	2.91322E-05
CACNB4	5.05	0.003536569
CAGE1	13.02	0.009734604
CALD1	5.11	0.001197183
CALML4	5.51	0.00028592
CAMK2G	4.03	0.004849458
CAMK4	5.43	2.65033E-05
CAMKK1	5.52	0.00052583
CAMSAP1	4.23	0.004099971
CAMSAP2	6.65	0.000139466
CAMTA2	4.20	0.001465949
CAND2	7.97	0.004445908
CAPN10	4.37	4.41638E-06
CAPN3	13.68	0.009112216
CAPN7	5.27	2.94706E-06
CAPRN2	6.74	0.000510721
CAPS2	15.92	7.32824E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CARD14	5.85	0.005651748
CARD8	4.16	0.000682089
CASC4	5.53	1.45986E-05
CASC5	7.82	1.7146E-05
CASP8	6.26	0.008250685
CASP8AP2	9.25	3.96996E-05
CAST	4.08	0.000353807
CBFA2T2	5.07	0.000513052
CBLB	4.85	0.002793353
CBLC	4.63	0.001275521
CBR4	5.76	0.000102652
CBWD1	4.05	0.00104079
CBWD2	4.34	0.006156898
CBWD3	6.07	0.000161142
CBWD6	6.84	0.001224275
CBX3	4.61	2.65015E-05
CC2D2A	4.79	0.002119341
CCAR1	5.89	7.94722E-05
CCBL1	4.81	0.008217072
CCDC104	5.01	0.000501345
CCDC106	22.81	0.002640227
CCDC110	12.95	0.003774972
CCDC112	7.86	0.000243297
CCDC122	58.98	3.67201E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CCDC130	5.96	0.000407353
CCDC132	4.30	0.006912173
CCDC136	4.13	0.008277912
CCDC138	6.36	0.000273136
CCDC14	10.17	0.001168948
CCDC146	7.75	0.000156837
CCDC15	4.79	0.008771075
CCDC150	6.98	0.001344105
CCDC171	7.85	0.000228995
CCDC18	8.17	7.2846E-05
CCDC25	6.38	0.000349168
CCDC40	5.01	0.003772177
CCDC41	7.18	5.05312E-05
CCDC57	8.09	0.000431778
CCDC59	7.76	0.000323039
CCDC66	7.04	2.42875E-05
CCDC7	9.84	0.001357282
CCDC74A	5.83	0.005725019
CCDC75	4.46	0.000670619
CCDC77	4.59	0.003920837
CCDC82	5.96	0.000197657
CCDC84	6.18	0.000237249
CCDC88A	9.70	3.50965E-05
CCDC88C	4.79	0.008379575

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CCDC90B	4.49	0.006335707
CCDC91	13.65	5.75054E-06
CCDC93	4.30	0.000470941
CCDC99	5.44	3.26253E-05
CCNB1IP1	5.54	0.000234379
CCNE2	7.48	0.000415809
CCNH	5.60	0.000581142
CCNJ	7.60	0.002778813
CCNL1	6.93	0.00016394
CCNL2	8.88	0.00014663
CCNT2	7.02	5.65753E-05
CCNYL2	9.46	0.002000295
CCP110	5.28	0.00017063
CCS	6.31	0.001999874
CCT6P1	8.06	0.004631688
CCT6P3	5.26	0.001452844
CD160	5.70	0.008007485
CD46	4.80	0.000246292
CD96	4.96	0.008497993
CDADC1	12.70	0.001349239
CDC37L1	4.20	0.001293699
CDC42BPA	8.19	7.56484E-06
CDC42BPB	4.36	0.007540215
CDC5L	4.84	0.000808854

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CDC7	4.04	0.004104138
CDCA2	5.71	0.000100343
CDH24	6.06	0.004306873
CDHR3	5.68	0.002623505
CDHR5	4.34	0.001095865
CDK10	5.66	0.003427487
CDK11A	4.53	8.96702E-05
CDK11B	4.99	0.001335735
CDK12	4.00	0.003088557
CDK17	4.31	0.003443564
CDK5RAP2	5.14	0.000231451
CDK5RAP3	5.63	0.004431349
CDK6	5.54	0.00057176
CDKL1	4.14	0.00059536
CEBPZ	6.15	7.16654E-05
CECR7	15.03	9.20343E-05
CELSR2	4.20	0.003835668
CENPC1	8.56	1.32179E-05
CENPE	9.50	7.95678E-06
CENPF	8.90	8.50489E-05
CENPI	4.39	0.00323526
CENPJ	7.99	0.000370824
CENPK	6.22	0.002950106
CENPQ	6.61	0.00133711

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CENPT	5.16	0.000152879
CEP112	5.53	0.000118012
CEP120	5.98	0.000249679
CEP128	6.00	1.39869E-05
CEP135	7.94	0.000114639
CEP152	7.92	0.000298341
CEP164	4.37	0.000318127
CEP170	6.48	4.47274E-05
CEP192	6.33	0.000262169
CEP250	5.15	0.004806792
CEP290	8.60	1.48813E-05
CEP350	8.67	2.52308E-05
CEP44	8.68	0.000444366
CEP57	6.37	0.000734512
CEP57L1	6.93	2.39244E-05
CEP63	5.60	0.000270416
CEP68	4.32	0.00738021
CEP70	5.40	0.000412579
CEP72	4.65	0.000384108
CEP78	12.77	4.23343E-05
CEP85	4.28	0.000783144
CEP85L	8.60	0.000155033
CEP89	5.18	0.001449836
CEP95	5.28	0.000171463

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CEPT1	4.30	0.000157102
CFDP1	5.88	2.73633E-05
CFLAR	6.02	0.007286638
CGNL1	4.31	0.003106308
CHD1	7.72	1.5034E-06
CHD2	5.72	8.00562E-05
CHD3	4.19	0.001047746
CHD4	4.48	0.000500745
CHD5	5.53	0.002482999
CHD6	6.04	0.000118053
CHD7	6.31	0.000993636
CHD8	5.46	0.001190504
CHD9	8.39	0.000275716
CHDH	4.26	0.001807507
CHKB	7.89	0.000446069
CHML	4.28	0.005631592
CHMP4A	6.36	0.002963516
CHORDC1	5.49	5.48303E-06
CHRNA10	20.48	0.000171583
CHRNA3	6.38	0.007417687
CHST15	10.49	1.93217E-05
CHST3	4.66	0.003669351
CIR1	4.88	0.000322075
CIT	5.97	3.2541E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CKAP2	5.99	8.00508E-05
CKAP2L	6.95	1.22437E-05
CLASP1	4.20	0.000247148
CLASP2	4.40	0.007564269
CLCC1	5.25	0.001844346
CLCN6	5.18	0.001677514
CLDN15	6.88	0.002052576
CLDND1	4.64	0.001366567
CLEC16A	4.07	0.002612404
CLINT1	4.68	0.00052803
CLIP1	6.38	0.000230354
CLIP4	5.38	0.000140373
CLK1	5.87	0.00015343
CLK4	7.55	0.003454507
CLOCK	6.86	0.000262501
CLSPN	5.76	1.13622E-05
CLSTN3	5.74	0.001703553
CMYA5	12.08	0.000740333
CNOT1	5.18	0.004361865
CNOT4	5.43	0.000117122
CNOT6L	5.16	0.001315147
CNST	4.66	0.004196252
CNTF	7.11	0.00066075
CNTLN	8.23	0.000133103

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CNTNAP3	8.05	0.003617499
CNTNAP3B	6.26	0.001870984
CNTRL	6.10	0.000157646
COBLL1	4.47	0.006287655
COG3	4.08	0.000287813
COG5	4.82	4.98573E-05
COG6	4.13	0.005508623
COL12A1	5.64	0.002748593
COL17A1	11.22	0.004374549
COL27A1	4.72	0.008473254
COL4A5	4.78	0.003676827
COL4A6	25.33	0.000328403
COPS2	4.18	0.000306273
COPS8	4.17	0.000128495
COQ10A	7.89	0.005564298
COQ6	4.93	0.005345392
CORO2A	4.21	0.003611621
CORO6	58.28	0.001568996
COX10-AS1	7.18	0.002832307
COX20	6.05	0.006367572
CPNE7	10.60	1.66177E-05
CPSF7	4.94	0.000377381
CRAMP1L	4.58	0.000502532
CRBN	4.11	0.001195656

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CREBBP	6.50	0.002316479
CREBZF	5.49	0.000397973
CRELD1	5.74	0.004981999
CRNKL1	5.37	0.000137345
CROCC	4.86	0.001228302
CROCCP2	7.14	9.62225E-05
CRTC3	4.09	0.003485816
CRY1	4.83	0.001156391
CRYBG3	6.58	0.000465363
CRYGS	6.19	0.001195922
CSAD	11.85	0.008619869
CSAG1	17.38	0.00446894
CSGALNACT2	5.03	0.000604078
CSNK1G3	4.57	0.003789199
CSPP1	4.85	0.00016693
CTA-217C2.1	7.32	0.002050482
CTA-313A17.4	15.98	0.001378994
CTA-445C9.14	6.10	0.009836885
CTA-714B7.5	7.23	0.003733125
CTAGE4	10.57	0.003307761
CTAGE5	5.47	1.95892E-05
CTAGE9	13.02	0.009734604
CTB-118N6.3	14.83	0.001813754
CTB-131B5.4	21.70	0.005821699

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CTBP1-AS1	4.69	0.003063051
CTC-203F4.1	4.83	0.002752517
CTC-281B15.1	5.61	0.008378358
CTC-479C5.12	5.58	0.003462528
CTD-2008P7.6	9.80	0.001059414
CTD-2013N24.2	30.37	7.1865E-05
CTD-2196E14.4	12.38	0.004377394
CTD-2196E14.9	5.24	0.002958861
CTD-2270P14.3	19.41	0.008018174
CTD-2349B8.1	4.92	0.001249094
CTD-2547E10.2	6.67	5.64364E-05
CTD-2561B21.5	5.48	0.000946643
CTD-3088G3.5	10.07	0.007510495
CTD-3092A11.1	7.13	0.005277432
CTD-3110H11.2	13.07	8.06794E-05
CTR9	4.69	0.000114906
CTSK	12.18	0.000658166
CTTNBP2	5.82	0.005216437
CTTNBP2NL	5.69	0.000119661
CTU1	4.37	0.000841184
CUBN	7.17	0.000199634
CUL2	4.08	2.19263E-05
CUL3	5.43	0.000707875
CUL5	5.09	0.000580532

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
CUL9	4.07	0.00036842
CWC15	4.22	0.000478162
CWC22	6.20	0.000180968
CWC25	4.88	6.5973E-05
CWC27	10.33	0.000363128
CWF19L2	7.78	4.34142E-06
CXorf23	6.64	0.000109721
CXorf38	4.27	0.003161748
CXorf57	6.88	0.001090093
CYB5R2	4.54	0.001524782
CYHR1	5.66	0.000213355
CYLD	4.29	0.003704202
CYP1A1	6.59	0.003139491
CYP20A1	4.83	0.000805209
CYP26B1	5.88	0.000647804
CYP2R1	5.56	0.002322509
CYP4F11	4.30	0.000347058
CYP4V2	5.98	0.001939616
CYTH2	5.27	0.001389471
DAAM1	5.20	0.000157286
DAB2	4.23	0.007022683
DBF4	10.06	0.000620127
DBF4B	4.01	0.000883971
DCAF17	4.22	1.3051E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
DCAF5	5.53	0.002457436
DCDC1	5.35	0.008096052
DCLK2	4.86	0.004419386
DCLRE1A	4.55	9.71252E-06
DCLRE1C	7.16	0.000324733
DCP1A	5.00	0.002090481
DCP1B	4.52	0.00120088
DCTN5	4.04	0.001427196
DCUN1D1	4.40	0.001107731
DCUN1D2	7.68	1.40931E-05
DCUN1D4	5.27	0.000169817
DDHD1	6.50	0.001020572
DDI2	4.28	0.002644763
DDX10	4.88	0.001529203
DDX11	4.22	0.000909319
DDX12P	5.53	0.003284657
DDX17	5.22	7.11193E-05
DDX19B	4.14	0.006761815
DDX21	5.17	3.05601E-05
DDX26B	5.48	0.007183214
DDX27	4.00	7.41614E-05
DDX39B	5.05	0.000427333
DDX46	7.09	9.15136E-05
DDX5	5.46	5.77493E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
DDX55	5.35	0.000864383
DDX60	7.67	0.00027443
DDX60L	6.99	0.000168511
DEK	5.56	0.000147053
DENND1B	5.68	0.00056083
DENND3	4.38	6.10415E-05
DENND4A	7.19	0.00010966
DENND4C	5.75	0.001927688
DEPDC1	6.21	0.000979999
DEPDC5	4.46	0.002261809
DFNA5	4.33	0.001181565
DFNB59	13.02	0.009734604
DGAT1	4.72	0.001440715
DGKD	4.50	0.000435825
DGKG	4.38	0.000400743
DGKH	7.88	6.11845E-05
DHFR	5.99	6.0385E-05
DHRS12	14.11	0.003154708
DHX29	5.58	0.000893499
DHX36	4.41	0.000671091
DIAPH2	5.21	0.001266549
DIAPH3	4.66	0.001135864
DICER1	5.86	0.000132361
DIDO1	4.99	0.003490877

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
DIO1	17.12	0.001993848
DIP2A	5.00	0.000307576
DIP2B	4.53	0.002340236
DIP2C	5.01	0.00011751
DIRC2	5.75	0.004466212
DIS3	4.83	0.000147092
DLEU1	4.40	0.007647736
DLG1	4.19	0.000204657
DLG4	7.19	0.009967324
DLGAP1	4.53	0.003676564
DLGAP5	5.25	0.000105212
DLX4	4.25	0.006008206
DMBX1	4.95	0.00046446
DMTF1	6.24	6.36252E-06
DMXL1	7.72	0.000236388
DMXL2	6.63	9.78016E-05
DNA2	6.19	2.26943E-05
DNAH1	8.55	0.004675342
DNAH10	4.38	0.002558048
DNAH11	13.39	0.00016813
DNAH14	8.03	0.00164182
DNAJA4	6.89	0.001945915
DNAJC10	7.05	2.28557E-06
DNAJC13	5.33	0.001926191

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
DNAJC2	5.11	0.000652713
DNAJC21	4.98	0.003281723
DNAJC24	5.25	1.87215E-05
DNAJC25	9.90	0.001981052
DNAJC27	12.23	0.000392584
DNASE1	5.36	0.001275484
DNHD1	8.91	0.007483993
DNM1	4.27	0.009218252
DNM1L	5.04	0.000362973
DNMT1	5.34	0.002426052
DNTTIP2	4.93	0.001462331
DOC2A	8.40	0.003967552
DOC2B	4.64	0.00071582
DOCK1	4.07	0.006715662
DOCK3	4.31	0.001068968
DOCK5	6.40	0.000479283
DOCK7	5.42	0.003186075
DOK3	4.55	0.000649731
DOM3Z	6.31	0.003204904
DOPEY1	6.69	0.000823166
DPH3	4.17	0.001981151
DPP8	5.50	0.000424051
DPY19L3	5.10	6.10503E-05
DROSHA	5.19	5.61955E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
DRP2	4.60	0.001605893
DSE	4.42	0.000923794
DSG2	4.57	0.000359144
DSN1	4.56	0.001696963
DSP	6.18	0.000697986
DST	8.43	0.000101832
DTNA	4.75	0.003433151
DUOX1	6.76	0.000428865
DUS4L	5.76	8.54743E-05
DYNC1H1	7.24	0.003728599
DYNC1LI1	4.84	0.000133484
DYNC2H1	4.68	0.003645329
DZANK1	5.54	0.000179122
DZIP1L	7.58	0.002119419
DZIP3	7.61	0.000369714
E2F7	4.47	0.001158782
EBAG9	4.77	0.000290018
ECHDC2	13.76	0.005253716
ECT2	4.68	2.65414E-05
EDEM1	7.00	0.001745447
EEA1	10.71	4.48216E-05
EFHC1	11.79	0.000982739
EGFR	6.89	0.000248394
EHBP1	6.20	0.000368722

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
EHF	5.88	0.00953044
EIF2A	5.00	0.000237516
EIF2AK2	5.94	2.3498E-05
EIF2AK3	6.28	8.16173E-05
EIF2AK4	5.27	3.28938E-05
EIF2C2	4.52	0.009258765
EIF2C3	6.89	6.96213E-05
EIF2S2	5.43	0.002445854
EIF3A	6.27	0.000845385
EIF3J	5.74	0.00037251
EIF4G3	6.11	0.000438229
EIF5A2	4.93	0.00124463
EIF5B	6.69	0.00119421
ELK3	4.29	0.002526749
ELK4	4.95	0.000786769
ELMOD2	6.29	7.09918E-05
ELMOD3	5.52	0.007528452
ELOVL5	8.90	0.00020505
ELOVL6	7.23	0.000467485
EMC9	4.41	0.003347271
EME1	5.99	0.00031574
EML4	4.21	0.000452662
EML6	5.08	0.001340306
EMP2	5.44	2.12887E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
EMR2	6.03	0.0028798
ENAH	4.01	9.22582E-05
ENO2	4.18	0.001148051
ENO3	5.78	5.58681E-05
ENO4	11.86	0.001597467
ENOSF1	6.71	5.19405E-05
ENPEP	9.74	0.001985008
ENPP4	6.70	0.004644155
ENTPD1	9.84	0.0024343
ENTPD4	5.04	0.000449985
ENTPD5	4.95	0.000300419
EOGT	4.83	0.001235618
EP300	7.11	0.001114491
EP400	5.84	0.00899776
EP400NL	7.93	0.000968846
EPB41L2	4.33	4.28976E-05
EPB41L4A	10.27	0.001044744
EPB41L4A-AS1	6.20	0.001915308
EPC1	4.83	0.001554462
EPC2	5.06	0.001583564
EPG5	5.71	0.002027329
EPHA10	4.86	0.005153934
EPM2AIP1	5.42	0.00326478
ERAP2	48.84	0.000108833

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ERBB2IP	6.47	0.000391652
ERBB3	4.28	0.002930671
ERC1	4.98	0.00164082
ERCC5	6.02	0.001676617
ERCC6	6.50	1.24048E-05
ERCC6L2	6.79	2.51307E-06
ERGIC2	4.25	0.005635084
ERI2	5.02	0.000493289
ERICH1	7.50	0.003224341
ERVH48-1	16.65	0.002789793
ERVK3-1	4.46	0.004799304
ESCO1	17.32	1.50321E-05
ESCO2	4.63	0.001236227
ESF1	7.11	0.000515948
ESYT3	7.80	0.003634489
ETAA1	12.97	2.95254E-06
ETNK1	5.34	3.94295E-06
EVI5	5.37	0.001875259
EXO1	4.86	0.002448211
EXOC1	4.36	0.000196937
EXOC5	4.05	0.008173027
EXOG	4.23	0.000256674
EXOSC8	4.26	0.000554798
EXOSC9	4.52	3.47287E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
EXPH5	7.30	0.000201
EXTL2	5.03	0.001680865
EYA3	4.09	0.001405421
EZH1	6.83	0.000715782
EZH2	4.57	0.00056521
F8	5.88	0.000836751
FAAH2	29.31	0.000309532
FADS1	7.52	0.000369836
FAM102B	4.26	8.41315E-06
FAM110C	5.00	0.001737793
FAM111A	7.51	0.000139382
FAM111B	8.46	1.02232E-05
FAM115A	9.28	0.000599958
FAM115B	14.43	0.000103123
FAM117B	8.11	0.000206823
FAM118A	6.03	0.001591911
FAM120A	4.76	0.001330875
FAM123B	5.44	0.000382104
FAM129A	4.54	0.007417108
FAM133B	9.03	0.000119915
FAM134B	5.04	0.006002125
FAM135A	4.80	0.000176365
FAM13A	4.87	0.001739437
FAM13B	5.01	0.001395267

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
FAM154B	8.82	0.004706111
FAM156A	13.36	3.1147E-05
FAM156B	8.75	0.000770181
FAM160A2	4.61	0.000649618
FAM161A	6.78	0.000353355
FAM168A	5.24	0.000125822
FAM169A	4.44	0.000973055
FAM171B	6.43	0.000314535
FAM175A	6.14	0.001433606
FAM177A1	4.32	0.000404881
FAM178A	4.64	0.000650855
FAM184A	8.62	0.001686167
FAM184B	5.11	0.00167425
FAM18B2-CDRT4	6.48	0.000483086
FAM190A	5.48	2.01628E-05
FAM190B	7.11	0.00054974
FAM192A	6.11	5.82144E-05
FAM193A	4.35	0.000294003
FAM193B	4.67	0.003537461
FAM199X	4.20	0.006129378
FAM200B	5.02	0.000543216
FAM203A	4.26	0.002585247
FAM204A	4.96	0.001595167
FAM206A	5.30	0.003821364

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
FAM208A	6.20	0.000209791
FAM208B	8.76	0.000316774
FAM214A	7.05	0.000928406
FAM217B	4.70	7.31674E-05
FAM219B	5.96	0.002449095
FAM21A	4.90	0.003507651
FAM21C	5.70	0.00013445
FAM35A	4.83	0.000411831
FAM40B	7.28	0.000136063
FAM45A	4.16	5.23793E-06
FAM46A	4.54	0.000111422
FAM47E	5.78	0.005124929
FAM48A	5.63	0.004131198
FAM59A	4.71	0.004642062
FAM63B	8.51	8.67697E-09
FAM69A	6.64	0.003001104
FAM72A	4.09	0.000368793
FAM72D	5.30	0.001509367
FAM73B	6.17	0.000183026
FAM76B	4.08	0.001907766
FAM83B	6.64	0.000656642
FAM86C2P	4.71	0.007366355
FAM92A1	4.73	0.000721918
FAN1	5.13	0.000330894

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
FANCA	4.02	0.000103694
FANCB	9.23	0.000224071
FANCD2	5.62	2.15053E-06
FANCI	4.34	0.000125464
FANCL	6.30	2.42962E-05
FANCM	7.08	0.0004867
FAS	4.63	0.007976504
FASTKD1	5.52	0.000748309
FASTKD3	5.23	0.004617488
FAT1	6.67	0.001054624
FBF1	6.13	0.000399441
FBN1	7.41	0.000656086
FBXL2	6.19	0.000671013
FBXL4	4.93	3.17793E-05
FBXL5	4.62	0.001197277
FBXL6	4.78	0.004158667
FBXO10	4.99	0.005387778
FBXO11	4.09	0.000237527
FBXO22	7.27	5.17549E-05
FBXO38	4.17	0.001540415
FBXO43	8.82	0.004706111
FBXO44	5.35	0.000730875
FBXO5	6.30	0.000281421
FBXW7	4.85	0.000590847

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
FBXW8	4.89	2.31395E-05
FCHO2	6.63	0.000431305
FER	9.64	0.000382506
FER1L4	6.13	0.004546538
FGD4	5.50	0.002440714
FGD6	6.48	4.25499E-05
FGF11	8.36	0.001800072
FGFR1	5.22	0.000319955
FGFR1OP	5.65	0.000257964
FGFR1OP2	4.41	0.001627585
FGGY	4.04	0.000840703
FIGF	10.75	0.004868483
FIGNL1	4.23	0.000274332
FIP1L1	4.78	0.000127166
FKBP10	7.90	2.86511E-05
FKBP11	17.80	0.000285637
FKBP15	4.76	0.001732573
FKBP3	6.20	5.19237E-05
FKTN	8.54	0.000167367
FLNB	4.54	0.007330391
FMNL2	6.03	0.001680597
FN1	5.05	2.18706E-05
FNBP4	7.53	2.20188E-06
FNIP1	4.78	0.000122567

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
FNTA	4.45	0.000869738
FOXD4	4.55	0.002738668
FOXD4L6	7.50	0.004377115
FOXF1	10.52	0.002906549
FOXL1	4.63	0.001677908
FOXN2	4.06	9.46287E-05
FOXO1	4.02	0.001039552
FRA10AC1	7.40	0.003267909
FRAS1	7.71	0.001877024
FRG1	5.81	0.001971462
FRMD6	4.52	0.000150917
FRS2	4.29	0.000231081
FRYL	6.32	0.000651537
FSD1L	5.18	0.002942625
FTX	8.40	0.000862523
FUT10	4.10	0.000895447
FUT2	5.63	0.002098926
FXR1	4.54	6.35044E-05
FYCO1	4.73	0.006658471
FZD3	5.28	1.76517E-05
G2E3	4.45	3.80671E-06
GABPA	4.10	0.00137651
GABPB2	4.26	0.001769276
GABRE	12.36	0.003247771

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
GABRQ	4.75	0.002069972
GAD1	6.11	0.007813448
GADD45A	4.56	0.002568638
GALNT3	6.87	0.000473758
GALNT5	4.71	0.000205794
GAN	5.25	0.007043613
GARNL3	4.06	0.005214297
GAS8	4.80	0.00532771
GATAD1	6.20	7.71797E-05
GCC2	12.58	0.000209125
GCET2	17.36	0.006989755
GCFC1	7.17	7.63683E-06
GCFC2	11.78	0.000395352
GCNT1	6.59	0.001959542
GDA	4.64	0.000155144
GDAP1	4.98	0.000502474
GDAP2	5.39	0.005081591
GDPGP1	5.30	0.007879634
GEN1	11.41	0.001879403
GFI1	4.71	0.003209716
GGA1	4.69	0.000119737
GGNBP2	4.47	0.000582404
GGPS1	4.29	0.005284298
GIGYF1	4.78	0.001399774

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
GIGYF2	4.87	0.003833459
GK5	4.33	0.001648811
GLB1L	4.89	0.004553564
GLI4	11.28	0.000815295
GLIS3	4.13	0.008645758
GNB1L	5.25	0.007669247
GNB3	5.70	0.00361336
GNL2	4.63	0.00027776
GNL3	4.55	5.07402E-05
GNPDA2	4.64	0.003984881
GNRH1	10.20	0.002411165
GNRHR2	4.89	0.001015629
GOLGA1	5.12	0.000185478
GOLGA2B	12.64	0.000121307
GOLGA4	7.95	8.93554E-06
GOLGA5	4.78	0.000345961
GOLGA6L5	12.01	0.00771324
GOLGA8A	9.73	0.000916928
GOLGA8H	6.82	1.86834E-05
GOLGA8IP	13.08	0.004115597
GOLGB1	8.96	2.44333E-05
GOLIM4	4.98	0.001630594
GON4L	4.84	7.37455E-05
GORAB	8.40	0.000317061

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
GORASP1	4.33	0.008083959
GPATCH1	4.27	0.00078493
GPATCH2	7.28	0.000476046
GPATCH4	4.93	0.002277397
GPATCH8	5.68	0.000299253
GPBP1	4.39	0.00017253
GPCPD1	6.83	0.000453512
GPM6B	6.70	0.006498569
GPR110	4.90	0.00371635
GPR126	5.70	8.3793E-05
GPR155	7.65	0.004160846
GPR158	7.67	0.004801564
GPR162	13.15	0.000593127
GPR180	4.27	0.007484962
GPR68	8.91	0.005178386
GPR89A	4.34	6.55506E-05
GPR98	5.10	0.003434307
GPSM2	4.34	0.000114524
GREB1L	5.35	0.005522526
GRIN2C	6.17	0.00028231
GS1-124K5.2	7.00	0.001406588
GS1-251I9.4	6.38	0.001436389
GSDMB	5.91	0.001137361
GSTCD	4.82	0.002526345

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
GSTK1	4.28	0.00546075
GTDC1	4.62	0.003734849
GTF2H2B	4.45	0.002678872
GTF3C3	4.19	3.95196E-05
GTPBP10	5.07	0.000649939
GTPBP2	4.31	0.000345195
GUCA1B	9.74	0.005414663
GUCY1B2	10.09	0.003510319
GULP1	4.91	0.000136235
GUSBP11	9.42	0.000239639
GUSBP3	6.71	0.00085762
GUSBP4_1	26.92	0.000743146
GUSBP9	5.91	0.001474823
GXYLT1	5.00	0.000168728
GYS2	14.39	0.004934867
GZF1	4.13	0.000968641
H3F3A	5.10	0.001099224
H6PD	4.34	0.004516402
HACE1	4.69	4.92064E-06
HAPLN3	4.14	0.000138119
HAUS3	5.99	0.001900847
HAUS6	5.70	0.002450937
HBP1	4.33	0.006670142
HCFC2	6.78	0.003117281

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
HCG18	6.82	0.001381093
HCN3	6.55	0.008606762
HDHD2	5.87	4.84957E-06
HEATR1	5.23	0.002208041
HEATR5A	4.47	0.006332584
HEATR5B	7.08	9.10752E-05
HECTD1	6.45	0.000334067
HECW2	5.97	1.00555E-05
HELB	4.72	0.004062381
HELLS	4.20	0.001218924
HELZ	7.00	0.000801931
HEMK1	4.21	0.003855773
HERC1	7.94	0.001825521
HERC2	6.94	0.00397449
HERC2P2	7.57	0.000131176
HERC2P3	5.05	0.002708227
HERC2P9	8.16	0.000178094
HERC3	5.37	0.005139649
HEXA	4.26	0.00609285
HHIP	27.15	0.000870244
HIAT1	4.55	0.004923652
HIBCH	4.56	0.003944086
HIP1	4.84	0.003907345
HIPK2	8.33	0.002243295

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
HIPK3	4.12	0.009750199
HIVEP1	8.57	0.000338121
HIVEP2	4.98	0.004815135
HIVEP3	6.88	0.003071992
HLA-DMA	6.22	0.006446581
HLF	24.62	0.006957266
HLTF	5.80	8.43803E-06
HMBOX1	5.92	2.62354E-05
HMGA2	4.66	1.44479E-05
HMGB1	4.64	0.000102244
HMGB2	4.34	0.000343593
HMGXB3	4.32	0.002863052
HMMR	6.83	0.000162012
HNF1A	7.08	0.008143672
HNF4G	4.05	0.006253615
HNRNPA1L2	5.60	0.003070424
HNRNPU-AS1	7.75	7.55335E-06
HOOK1	7.25	8.30637E-05
HOOK2	5.03	0.000383575
HOOK3	6.01	1.27952E-05
HOTAIRM1	8.34	0.000676203
HOXA6	7.64	0.006305437
HOXA-AS3	9.36	0.007608827
HOXA-AS4	5.71	0.004226354

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
HOXB6	8.70	6.32619E-05
HPS5	4.08	0.003176575
hsa-mir-4763	6.26	0.001299219
HSD11B2	7.45	0.000181028
HSF4	4.56	0.004573013
HSH2D	4.25	0.002288718
HSP90AA1	4.07	0.000957244
HSP90AA4P	4.59	0.008820222
HSP90AA5P	6.45	0.001853704
HSP90B1	4.23	0.00015922
HSPA12A	4.09	1.16546E-05
HSPA4L	4.75	0.007959084
HSPBAP1	4.46	0.000983581
HSPH1	4.17	0.00039431
HTATSF1	4.90	0.001951304
HTT	7.17	0.000803107
HUWE1	8.22	0.002454402
HYAL3	6.13	0.000920211
IBTK	5.55	0.001775095
ICK	4.07	0.000871793
IDE	4.51	0.001179327
IDI1	5.15	0.000336119
IDI2-AS1	34.69	0.000129338
IFIH1	5.41	0.002744205

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
IFNAR1	4.27	0.000414344
IFT122	4.55	7.57072E-05
IFT140	4.32	0.001329524
IFT27	4.62	0.000279652
IFT57	4.58	0.000120007
IFT74	17.90	7.51745E-05
IFT80	15.24	0.00274648
IFT81	5.65	0.006343324
IFT88	5.73	0.000680569
IGF2BP2	4.38	0.00254995
IGF2BP3	4.97	3.80721E-05
IGHMBP2	4.22	0.00395988
IGHV3OR16-6	9.52	0.009966006
IGIP	10.65	0.000155944
IGSF1	27.15	0.000870244
IGSF9B	4.22	0.001517657
IK	4.33	0.001222249
IKBIP	5.70	0.000219471
IL10RA	6.45	0.001853704
IL15	13.43	0.005916296
IL17RB	10.56	5.37069E-05
IL18	5.47	0.008439532
IL18BP	9.45	0.000295314
IL1R1	4.49	0.003731446

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
IL6ST	8.62	0.00146989
IMPG1	5.83	0.001817575
INADL	5.77	0.000286593
INO80	4.52	0.002375893
INO80B	5.69	0.00456712
INO80D	7.53	4.55423E-06
INPP4A	4.10	0.000201117
INPP4B	7.51	4.79901E-05
INPP5E	4.02	0.003596353
INPP5F	4.11	7.88886E-05
INTS12	4.27	0.001852644
INTS2	4.04	0.001689774
INTS6	4.27	0.003236037
INTU	8.81	0.000274882
INVS	9.43	6.50938E-05
IPP	5.41	0.001651166
IQCB1	7.48	0.001169273
IQCG	4.75	0.00040044
IQCK	6.08	0.000360711
IQGAP1	4.03	0.001788583
IQGAP3	4.64	0.000434027
IQSEC1	4.90	0.002327093
IQSEC2	6.58	4.52899E-05
IRAK4	4.77	2.2073E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ITFG2	8.61	0.000120455
ITGA2	5.01	0.000129063
ITGAV	5.38	0.000685264
ITGB3BP	6.77	3.04182E-05
ITIH4	7.64	0.003705908
ITPR1	6.15	0.002551647
ITPR2	11.72	0.000113086
ITPR3	4.57	0.008458858
ITSN1	6.14	9.34679E-06
ITSN2	7.07	5.8646E-05
IWS1	4.50	2.5514E-05
J01415.25	15.91	0.002391479
JAK2	5.86	0.001665571
JHDM1D	4.09	0.005533461
JMJD1C	8.61	2.47174E-06
JMY	7.34	0.001242347
JPX	10.18	0.000163879
JRK	6.01	0.00137379
KANK1	4.04	0.001365939
KANSL1L	5.07	0.007667886
KAT6A	5.29	0.000584643
KAT6B	6.42	0.006157122
KATNAL2	8.47	0.008735126
KBTBD4	4.25	0.000197521

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
KBTBD8	5.68	0.000385352
KCNAB3	28.96	0.002805905
KCND1	7.09	0.000905738
KCNK6	8.44	0.000230179
KCNQ4	5.03	0.001708664
KCTD15	4.71	0.002361684
KCTD3	4.57	0.000223425
KCTD9	4.07	1.85093E-05
KDM3A	4.16	0.000275486
KDM5A	4.83	0.000240774
KDM5B	4.01	0.000300486
KDM6A	4.56	2.94383E-05
KIAA0020	5.49	1.58669E-05
KIAA0141	5.23	0.000111873
KIAA0196	4.89	0.000129139
KIAA0232	5.42	9.60568E-07
KIAA0284	5.26	0.002533628
KIAA0319L	4.38	0.001973911
KIAA0368	4.86	0.001987
KIAA0430	4.89	0.003142705
KIAA0494	4.69	3.16171E-06
KIAA0556	5.63	0.000791884
KIAA0564	5.16	0.000309852
KIAA0586	5.94	0.000149893

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
KIAA0664L3	5.67	0.003188679
KIAA0753	5.94	1.25805E-05
KIAA0895L	8.28	0.002328474
KIAA0907	5.31	7.87507E-05
KIAA0913	4.93	0.001127822
KIAA0922	4.59	0.001456264
KIAA0947	6.56	0.000148974
KIAA1009	7.08	0.00059322
KIAA1024	7.63	0.000304732
KIAA1033	4.46	0.000448176
KIAA1107	8.71	0.000304252
KIAA1109	8.65	0.000660353
KIAA1143	6.94	0.000105646
KIAA1147	5.21	0.000423845
KIAA1211	4.27	0.000585561
KIAA1244	8.99	0.001428098
KIAA1324L	4.52	0.003817773
KIAA1328	10.84	0.007516989
KIAA1377	19.20	2.27706E-05
KIAA1407	6.06	0.001291925
KIAA1429	5.40	0.000313823
KIAA1430	6.13	6.03671E-06
KIAA1432	5.86	0.000505137
KIAA1468	8.12	0.000346565

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
KIAA1524	8.44	0.000126557
KIAA1549	6.55	0.000181519
KIAA1586	10.78	0.004056588
KIAA1598	6.83	0.000117099
KIAA1671	4.17	0.0021229
KIAA1683	8.17	0.000841664
KIAA1704	4.88	0.000664523
KIAA1715	4.18	0.000368485
KIAA1731	8.56	5.24456E-05
KIAA1737	11.44	0.001318939
KIAA1841	5.68	0.000193703
KIAA1958	6.77	0.000253609
KIAA2018	10.52	0.000127353
KIAA2026	10.23	4.59282E-05
KIF13A	4.20	0.008601653
KIF14	6.39	7.27604E-06
KIF15	6.81	0.000337522
KIF18A	8.36	3.45474E-06
KIF1B	5.16	0.002060112
KIF20B	10.53	1.25437E-07
KIF21A	5.92	0.000138806
KIF23	5.08	0.000632341
KIF24	5.94	0.002920871
KIF27	6.02	0.001604314

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
KIF2A	4.18	0.000111256
KIF3A	5.34	0.000830792
KIF4A	4.03	0.000931254
KIF5B	5.95	5.07938E-05
KIFC2	6.21	0.000493258
KIN	5.22	0.000151783
KIRREL	4.96	0.000458738
KITLG	5.24	0.000836709
KLF7	4.17	0.007725373
KLHL17	4.83	0.00028184
KLHL20	4.14	0.004167848
KLHL22	4.89	0.003064812
KLHL36	4.11	0.00086999
KLHL5	5.42	0.004338932
KLK7	5.55	0.007201858
KLRAP1	9.43	0.000201673
KNTC1	6.67	4.36614E-05
KPNA1	4.50	0.000602587
KPNA5	8.60	0.000127465
KRI1	4.22	0.001364643
KRIT1	4.68	0.000506081
KRR1	5.78	9.33647E-05
KRT15	5.63	8.9569E-05
KRT23	4.28	0.008634559

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
KRTAP4-7	15.20	0.004498152
KSR1	5.51	0.000324487
KSR2	9.75	0.000871739
KTN1	7.21	0.000235509
L3MBTL1	11.52	0.000807338
L3MBTL3	4.54	0.004550635
LACC1	8.64	0.002326215
LAMA3	5.55	0.001994542
LAMA5	7.33	4.97656E-06
LAMB2	5.69	0.000276314
LARP1B	5.01	0.00025568
LARP7	5.64	4.02472E-05
LAT	11.87	0.00446701
LATS1	5.29	0.000133806
LCA5	12.45	0.001023255
LCA5L	10.86	0.00434738
LCOR	4.80	0.000234815
LCORL	8.43	8.61129E-05
LENG8	5.69	0.000182171
LEO1	5.17	0.001469388
LEPR	5.75	0.000274748
LGALS8	7.26	9.08707E-05
LIFR	5.80	0.000412075
LIG4	4.17	7.50649E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
LIN54	5.71	0.000863563
LINC00242	10.50	0.005610614
LINC00263	6.32	0.002566434
LINC00265	6.62	0.000137476
LINC00342	24.68	0.000336406
LINC00470	9.40	0.000999146
LINC00476	13.22	0.004694292
LINS	5.08	8.03989E-05
LL0XNC01-237H1.2	10.10	0.001709026
LL0XNC01-237H1.3	27.85	0.001207234
LL22NC03-80A10.6	4.16	0.007168623
LLPH	4.29	0.001418845
LMBRD2	7.73	0.005541211
LMLN	8.16	4.72833E-05
LMO7	6.25	0.000508399
LPIN1	4.49	1.25519E-05
LPIN2	4.52	0.00141784
LPIN3	6.27	0.004283765
LPP	10.29	9.08237E-05
LRAT	5.08	0.006533511
LRBA	6.38	0.001746241
LRCH3	7.02	0.00338775
LRIF1	6.97	0.000977086
LRIG2	5.62	0.003132015

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
LRP1	4.84	0.004244876
LRP2BP	13.90	0.000763858
LRP4	4.59	0.004343043
LRP5L	10.93	0.004555176
LRP6	5.73	4.65487E-05
LRP8	4.41	2.37862E-05
LRRC34	12.05	0.003354489
LRRC37A11P	20.39	3.65134E-05
LRRC37A2	6.69	0.000929593
LRRC37A3	7.28	0.000199659
LRRC37A4P	19.32	0.001612195
LRRC37B	5.57	0.003612215
LRRC37BP1_1	4.99	0.000435834
LRRC56	13.24	0.002813056
LRRC58	4.70	0.004039822
LRRC6	5.95	0.008980252
LRRC66	13.02	0.009734604
LRRC8C	4.23	0.004249303
LRRCC1	11.69	0.000371976
LRRFIP1	6.89	2.94476E-05
LRRFIP2	6.36	3.30948E-05
LRRIQ1	14.22	0.000664038
LRRK1	7.32	0.000207028
LTB4R	9.43	0.000301048

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
LTB4R2	13.67	0.002355404
LTK	4.83	0.005308514
LTN1	7.05	0.004819623
LTV1	4.57	0.000330944
LUC7L3	7.09	4.66505E-06
LUZP1	5.02	9.62844E-05
LYAR	4.17	0.00074861
LYG1	24.46	0.003366257
LYPD6	13.09	0.001880893
LYPLAL1	4.26	0.003214919
LYRM2	5.06	0.00011015
LYRM7	7.85	6.7892E-05
LYSMD3	9.01	0.002980326
LYST	9.23	7.01264E-06
LZTS2	4.06	0.004435493
MACF1	7.58	3.05934E-05
MACROD2	6.25	0.007779889
MADD	4.05	0.002399447
MAGEB17	14.84	0.001942872
MAGI3	7.36	0.00013485
MAK16	5.84	0.001662541
MALAT1	8.18	0.001734594
MALT1	5.92	0.000489354
MAN1A2	5.41	7.93104E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
MAN2A2	5.44	0.000675956
MANEA	5.57	0.000907561
MAP1B	5.95	0.000191152
MAP2	7.76	0.001988524
MAP3K1	4.20	0.002646556
MAP3K2	6.55	1.39247E-05
MAP3K4	4.36	0.001278757
MAP4K5	7.56	0.000156315
MAP7D3	5.51	0.000137739
MAPK11	4.90	0.003504965
MAPK12	4.15	0.002144135
MAPK15	12.49	0.000983431
MAPK8IP3	5.58	0.000216565
MAPKAPK5-AS1	4.41	0.001388749
MARCH1	8.20	0.000847494
MARCH7	4.02	0.000591267
MARK3	4.34	0.000581318
MAT2A	4.65	0.000122711
MATN2	5.21	0.004256049
MAVS	4.57	0.00075378
MBD5	10.98	0.000128869
MBIP	4.14	0.006474879
MBLAC2	7.41	0.000234924
MBNL1	7.23	2.03412E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
MBNL2	6.34	0.001545419
MBOAT2	4.10	0.000599394
MCEE	15.74	0.005676543
MCM3AP	4.99	0.000660377
MCM8	7.57	3.6326E-05
MCM9	5.04	0.006165424
MCPH1	4.20	0.003378349
MCTP2	5.13	0.000709243
MDC1	5.17	0.000254792
MDH1B	11.56	0.000209658
MDM1	6.92	0.000271159
MDM4	4.34	0.000471359
MDN1	7.87	0.000627974
MECOM	4.81	0.009928391
MED1	5.17	0.000226791
MED12L	6.18	0.002117172
MED13	5.94	0.001379283
MED13L	5.65	0.001920934
MED14	4.29	0.001023957
MED17	4.10	0.001653699
MED21	4.05	0.002104271
MED23	4.87	1.25213E-05
MED31	4.46	0.004696431
MEF2A	4.09	0.000802608

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
MEGF8	5.21	0.005020704
MERTK	4.47	0.001925435
METAP1D	5.36	0.000420558
METAP2	4.22	8.74618E-05
METTLL14	5.06	0.004487589
METTLL15	4.44	4.6618E-05
METTLL21A	4.38	0.00515686
METTLL21D	4.25	0.005053649
METTLL22	5.82	0.000488674
METTLL3	5.85	3.2026E-05
METTLL6	4.21	0.000703828
MFAP1	5.50	0.000880482
MFSD8	7.05	0.000685908
MGA	7.35	0.001019626
MGEA5	4.50	0.000188504
MIA3	7.79	7.71734E-06
MIB1	5.22	0.00258821
MICAL1	4.99	0.00138954
MICAL2	4.15	0.005610378
MICAL3	4.17	0.001367903
MID1	5.70	1.72468E-05
MIER1	4.46	0.002628902
MIOS	5.99	0.000126898
MIPOL1	6.16	0.000746132

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
MIR17HG	4.56	0.007200255
MIR22HG	7.07	0.001887873
MIR4720	8.00	5.64487E-05
MIRLET7DHG	5.34	0.00449214
MIS12	4.71	4.34631E-05
MIS18BP1	10.37	0.000388928
MITD1	5.38	3.51279E-07
MKI67	8.59	6.35718E-05
MKI67IP	4.07	0.00029472
MKL2	5.81	0.001648574
MKLN1	6.49	0.000437767
MKRN3	11.76	0.003991591
MKX	6.04	0.000224539
MLF1IP	5.97	5.89939E-06
MLH1	5.18	0.001185328
MLH3	7.06	0.00026623
MLL	9.01	0.00011525
MLL2	8.99	0.002285806
MLL3	8.27	6.86773E-05
MLL4	4.61	0.000669782
MLL5	9.15	0.000351389
MLLT10	4.63	0.000194655
MLLT4	4.82	0.001931063
MLXIP	4.66	0.002644522

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
MMRN2	5.75	0.000239709
MMS22L	5.04	6.01282E-05
MNAT1	5.13	0.001080201
MNS1	35.12	0.00300948
MOB1B	6.14	0.003209499
MOCOS	4.27	0.002693556
MOCS2	4.55	0.000493174
MOK	4.53	0.002764809
MON2	7.54	0.000929289
MORC3	5.51	1.00799E-05
MPHOSPH10	5.96	0.000119984
MPHOSPH6	4.99	5.4992E-05
MPHOSPH8	6.11	0.000466164
MPHOSPH9	5.76	0.000205569
MPP3	5.86	3.02149E-05
MPP5	4.09	0.00035833
MPPE1	6.14	0.007568181
MPRIIP	4.21	0.004157072
MRAP2	10.50	0.005610614
MRE11A	8.18	7.31205E-05
MRI1	4.46	0.000389324
MRPL1	4.12	0.000346015
MRPL45P2	12.03	0.002396031
MRPS25	9.32	0.000230081

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
MRPS31	7.62	0.000317819
MRPS5	5.32	0.000128624
MRRF	4.16	0.004852554
MRVI1	4.85	0.000113949
MSANTD2	8.34	0.005205433
MSANTD4	4.25	0.001067489
MSH3	11.41	0.000268804
MSH5	10.35	0.000389418
MSL1	4.41	0.000218155
MST1P2	16.26	0.002645669
MT-ATP6	15.15	0.002289756
MTBP	5.22	0.000104432
MT-CO1	7.83	0.000329602
MT-CO2	4.17	0.007241729
MT-CO3	12.52	0.002237538
MTCP1	5.73	0.002686097
MT-CYB	10.00	0.001782007
MTDH	4.53	0.000106613
MTERF	9.50	0.001222646
MTERFD2	5.04	0.001033389
MTERFD3	11.67	0.000108176
MTF1	4.91	0.000969465
MTF2	4.23	0.000379899
MTG1_2	7.46	0.009123008

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
MTHFD2L	6.45	0.001719581
MTIF3	4.20	0.007415912
MTMR11	6.00	0.001551033
MTMR2	4.87	0.00040823
MTMR9	5.37	0.000981508
MT-ND1	8.87	0.004736423
MT-ND2	11.15	0.001132188
MT-ND4	12.84	0.006645111
MT-ND4L	12.77	0.007789498
MT-ND5	19.58	0.001360846
MT-ND6	22.09	0.001763989
MTOR	4.53	0.001096916
MTPAP	4.02	0.002564229
MTR	6.68	1.51489E-05
MTRF1	5.99	0.000426951
MTRF1L	4.34	4.26913E-05
MTUS1	5.24	0.000311782
MTX3	4.32	0.001109263
MUC1	5.85	0.005651748
MUC20	18.49	0.001322671
MURC	5.45	0.000715694
MXI1	4.19	0.001003216
MYCBP2	10.27	6.26826E-08
MYH10	5.32	0.006230448

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
MYH15	7.35	8.16065E-05
MYH3	6.14	0.002598432
MYLK	7.46	0.001733842
MYO10	5.92	0.001395015
MYO18A	4.55	0.005747609
MYO1B	4.37	0.005327261
MYO5A	5.86	0.000199559
MYO5B	5.45	0.000604847
MYO5C	4.55	0.002699559
MYO6	5.64	0.000835135
MYO9A	7.35	4.49642E-05
MYOF	4.95	9.291E-05
MYSM1	6.72	9.55636E-05
MYT1	4.93	0.00199012
N4BP2	7.83	3.37382E-05
N4BP2L2	8.13	0.001802173
N6AMT1	4.65	0.001553984
NAA15	5.35	9.72598E-05
NAA16	5.67	0.000199024
NAA25	4.40	8.95868E-05
NAA38	5.02	0.000152978
NAALAD2	14.27	0.005690566
NAB1	4.31	0.000419443
NABP1	6.34	0.000402678

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
NADSYN1	6.42	0.000338614
NAE1	4.45	4.14635E-05
NAGK	4.65	0.004161203
NAIP	7.70	0.000810835
NANOS1	6.16	0.00144456
NAPB	4.98	0.004681816
NAPEPLD	4.99	0.001804729
NARG2	5.12	5.07722E-05
NARS	4.42	5.68487E-05
NAT1	5.29	0.004377578
NAV1	7.22	0.008314324
NAV2	9.71	0.000857974
NAV3	7.37	0.004702011
NBAS	4.73	0.002826311
NBEA	5.55	0.000270766
NBEAL1	6.69	0.000261699
NBEAL2	4.80	0.001139294
NBN	8.33	9.26718E-06
NBPF1	5.25	0.001814513
NBPF10	5.41	5.84645E-05
NBPF12	9.44	0.002690947
NBPF14	7.13	0.000269531
NBPF15	6.26	0.000225754
NBPF20	6.41	0.000101846

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
NBPF24	6.18	0.000604012
NBPF8	7.94	0.000362054
NBPF9	5.95	0.005971625
NCAPG	4.88	0.002198203
NCL	4.39	0.001447297
NCOA1	6.93	0.004683326
NCOA2	5.37	0.001373475
NCOA3	4.41	0.00041102
NCOA6	9.14	0.000144209
NCOR1	6.14	2.80644E-05
NDC80	5.89	0.000115865
NDEL1	4.05	0.00220858
NDST2	4.09	0.002738207
NDUFAF2	5.90	0.00049506
NDUFAF5	4.23	0.002707083
NEAT1	7.95	0.000528861
NEBL	4.91	0.000751224
NEDD1	4.74	0.001323938
NEDD4	5.49	0.00012687
NEIL1	5.13	0.002555284
NEK1	6.77	4.86383E-05
NEMF	6.42	6.64452E-07
NES	5.97	0.001124383
NEU3	4.17	0.000488802

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
NF1	6.43	0.000107077
NFAT5	8.53	8.67616E-07
NFATC2IP	5.31	7.92998E-07
NFATC3	4.34	0.000723657
NFIA	5.04	0.001719416
NFRKB	4.26	0.000998713
NFX1	4.85	0.000418752
NFXL1	5.59	0.000148769
NHLRC2	4.66	0.000137213
NHLRC3	11.58	0.000152943
NHS	6.93	0.000647639
NIN	6.35	1.1596E-05
NINL	4.22	0.00367383
NIPAL2	7.11	0.002022671
NIPBL	9.72	4.13711E-06
NISCH	5.16	1.01737E-05
NIT2	4.68	0.006347976
NKAPP1	14.83	0.001813754
NKD1	5.48	0.000526766
NKTR	12.00	7.11206E-05
NLGN2	4.53	0.000375688
NLRC4	51.36	0.000629161
NLRP1	4.70	0.001390813
NME6	4.46	0.004026732

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
NMT2	4.85	7.21264E-05
NOC3L	6.15	0.000273872
NOL10	4.73	0.000404296
NOL8	6.76	0.000100539
NOP58	5.38	0.000627059
NOSTRIN	19.92	0.000514548
NOTCH2NL	4.61	0.001776677
NOXRED1	8.82	0.004706111
NPAT	9.07	0.000248083
NPDC1	7.68	3.30282E-05
NPHP1	8.89	0.000454048
NPHP3	6.02	0.001248481
NPIPL3	10.62	1.31668E-06
NPM1	4.47	0.000166051
NPNT	6.60	1.5119E-05
NPR2	8.31	0.009570408
NR1D2	4.32	0.000185175
NR2C1	4.38	0.006870607
NR2C2	5.05	0.001269793
NR3C1	4.05	0.002907354
NRBP2	5.67	0.001122565
NRD1	5.21	0.00035389
NRG4	17.77	7.40042E-06
NRIP1	5.99	1.77828E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
NRP1	4.05	0.004187903
NSA2	6.15	0.000336604
NSD1	6.06	0.00159679
NSFP1	6.13	0.003912221
NSRP1	6.24	0.000131343
NSUN5P1	6.46	0.000310934
NSUN5P2	9.80	0.000234452
NSUN6	6.49	0.001177284
NUBPL	5.02	0.001336097
NUCB2	7.28	6.30074E-06
NUDT12	6.42	5.01715E-06
NUDT13	8.78	0.000466821
NUDT16	7.61	0.000811527
NUDT17	8.49	0.000179634
NUF2	6.70	0.00012809
NUFIP2	5.68	4.51957E-06
NUP153	5.10	0.001337112
NUP205	4.18	0.000448948
NUP214	4.90	8.29418E-05
NUP54	5.20	1.48617E-05
NUP62CL	8.14	0.00152983
NUP98	4.25	0.003491349
NUPL2	5.63	0.000137787
NUSAP1	5.38	4.45799E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
NVL	4.56	0.000106694
OCRL	4.33	0.001914923
ODF2L	11.85	9.8817E-06
OFD1	6.44	0.001507308
OGT	6.63	1.42373E-05
OIP5-AS1	4.46	0.000130868
OMA1	4.96	0.00560997
ONECUT2	10.77	0.000166971
ONECUT3	4.50	0.001563597
OPA1	6.01	0.000886003
OPA3	4.50	0.000912068
OPHN1	4.17	0.004969351
OPN3	9.32	0.009523088
ORAOV1	4.12	0.000360405
ORC3	7.82	0.001160375
ORC6	4.12	0.000168154
ORMDL1	5.31	0.002703337
OSBPL8	4.86	0.001990103
OSMR	4.23	0.001964982
OTUD3	4.91	0.00014009
OTUD6B	5.17	0.000851655
OVGP1	15.18	0.00033885
OXR1	5.88	0.005118115
P2RX7	6.26	0.009489011

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PABPC1L	10.83	3.63622E-05
PACRGL	4.30	0.000470931
PAIP2B	4.16	0.000910822
PAK1IP1	5.56	0.000723021
PALB2	6.54	1.99988E-05
PALLD	4.12	0.000182849
PAN2	6.43	0.000877714
PANK2	4.43	0.000140971
PANK3	5.04	0.001746431
PAPD5	5.11	0.001915981
PAPLN	6.73	0.002360159
PAPOLA	4.14	0.00054375
PAQR6	8.52	0.009525933
PARP11	4.30	0.002685835
PARP14	6.86	0.005018805
PARP16	6.65	0.002322393
PARP4	5.44	0.000237489
PARP6	5.78	0.000711635
PARP8	4.38	0.002701381
PARPBP	6.25	5.6715E-05
PASK	4.28	1.0129E-05
PAWR	6.11	0.00096265
PBRM1	5.29	0.000806917
PCBD2	4.18	0.002652942

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PCBP1-AS1	7.46	0.003619499
PCDH12	5.88	0.000600459
PCDH7	8.05	0.00385605
PCED1A	11.11	0.002054421
PCF11	6.33	8.96635E-05
PCGF3	6.79	5.54476E-05
PCGF5	4.61	0.00016612
PCID2	4.55	6.62198E-05
PCLO	10.99	0.000263477
PCM1	6.79	3.78414E-05
PCMTD1	8.18	0.001448907
PCNT	6.25	0.002554214
PCNX	6.56	7.9815E-05
PCNXL2	8.07	0.000282241
PCSK5	4.82	0.000302102
PCSK7	4.00	0.001013977
PCYOX1	4.32	0.000541955
PCYOX1L	4.51	0.000898993
PDCD10	4.86	1.84811E-05
PDCD6IP	4.14	1.2389E-05
PDCD7	4.21	0.000351633
PDDC1	4.42	0.000831499
PDE3B	4.61	0.003353554
PDE4DIP	4.37	0.001420269

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PDE5A	4.05	0.007451468
PDE8A	5.04	0.000871224
PDLIM5	4.01	0.001914507
PDPK1	4.32	0.000641021
PDPR	4.51	0.000550589
PDS5B	6.33	0.000838856
PDSS1	5.22	0.001738639
PDZD8	5.66	0.002894251
PEAK1	8.93	3.15335E-05
PEAR1	6.66	0.00140848
PECR	5.71	0.00787969
PEG10	7.11	0.002006661
PER3	7.07	0.007594293
PEX1	4.09	0.002355541
PGBD1	4.82	0.004203511
PGM2L1	5.74	0.009087234
PGM3	4.06	0.001187121
PGM5P2	17.69	0.000177256
PHACTR2	7.25	0.001236555
PHAX	6.39	0.000225002
PHC3	7.61	0.000984555
PHF12	4.70	7.01641E-05
PHF14	5.00	0.001852063
PHF20	4.35	0.006008112

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PHF20L1	5.33	0.000436786
PHF21A	6.94	0.000347099
PHF3	8.70	1.27057E-05
PHIP	7.12	9.21086E-06
PHKA2	5.37	0.000575164
PHLPP1	4.21	0.004058846
PHTF1	6.15	0.000977764
PI4KA	4.37	0.00452737
PI4KAP1	6.91	0.0039119
PIAS1	4.06	0.000656498
PIAS2	4.87	0.000165861
PIBF1	9.24	4.76536E-05
PIDD	4.17	0.003079429
PIEZO1	5.09	0.005094894
PIF1	6.25	0.002543169
PIGB	5.07	0.002440278
PIGF	4.07	0.000180792
PIGG	4.07	0.00014469
PIGL	5.28	0.004091832
PIGN	5.85	0.001710867
PIK3C2A	8.05	0.001547471
PIK3CA	5.52	0.003509223
PIK3R1	6.75	0.00035072
PIKFYVE	5.16	0.004779862

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PILRB	6.83	0.001454479
PIN4	5.08	0.000869907
PITPNM2	6.00	0.003415459
PKD1	7.42	0.003033117
PKD1P5	11.57	0.001261422
PKDREJ	17.71	0.000277497
PKP2	4.77	7.59735E-05
PKP4	4.38	5.66635E-05
PLA2G12A	4.69	0.000135968
PLA2G16	4.42	0.00905963
PLAC2	12.57	0.002503318
PLAC8L1	26.59	0.000484349
PLAGL1	4.01	0.000137472
PLCB1	5.37	0.000818584
PLCD4	9.11	0.005380676
PLCG1	4.48	0.00041837
PLCXD1	4.48	0.000211997
PLCXD2	4.54	0.001775747
PLEKHA5	5.43	0.000776109
PLEKHA6	4.20	0.002797527
PLEKHA8	4.10	0.000577956
PLEKHA8P1	6.84	0.00557697
PLEKHG1	5.92	0.001368294
PLEKHG3	4.19	0.003280375

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PLEKHG4	6.20	4.47598E-05
PLEKHG5	5.78	0.001300123
PLEKHH1	5.40	0.005928565
PLEKHH2	7.08	0.001451116
PLEKHM1P	6.64	0.000445987
PLEKHM3	6.34	0.000855805
PLIN4	11.80	0.006760867
PLIN5	25.33	0.000328082
PLK1S1	4.42	0.00170151
PLK4	5.32	2.44728E-05
PLXNA1	4.08	0.007383576
PLXNA3	4.04	0.001013772
PLXNB1	4.19	0.009881825
PLXNC1	5.91	0.000148669
PMFBP1	16.88	0.00075084
PMPCB	4.08	0.000620145
PMS1	7.20	0.001586019
PMS2CL	4.21	0.00010796
PNISR	9.73	1.78032E-05
PNN	8.02	0.000158686
PNPLA8	5.73	0.001100821
PNPT1	4.28	0.000358885
POGLUT1	6.14	0.000527086
POGZ	4.53	3.02714E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
POLD3	4.19	0.001916544
POLE	5.33	0.000432883
POLG2	5.06	0.000239144
POLI	7.42	7.85265E-05
POLK	8.74	9.70297E-05
POLM	4.57	0.001377428
POLQ	7.31	0.000198328
POLR1A	4.62	0.003106345
POLR2A	4.98	0.000290963
POLR2J2	10.91	0.001239794
POLR2J4	7.17	0.001975849
POLR3F	5.28	0.000457428
POLR3G	5.98	0.000203919
POM121	4.55	0.004326487
POM121C	4.41	0.003904966
POMT2	4.43	0.000111068
POTEF	8.70	0.000351111
POTEI	13.71	0.003817548
POU2F1	5.53	0.000716765
PPARG	6.01	0.00021871
PPARGC1B	5.34	0.002852327
PPCS	5.61	0.001312579
PPFIA1	5.00	0.000936382
PPFIA2	11.76	0.004963657

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PPIG	6.88	0.000776276
PPIL4	5.63	0.001555742
PPIP5K1	5.16	0.00173492
PPIP5K2	4.13	0.000191626
PPM1A	4.40	0.002532788
PPP1R12A	6.88	0.001995221
PPP1R12B	5.33	2.52558E-05
PPP1R21	4.34	0.002175769
PPP1R9A	6.87	0.000328834
PPP2R3A	5.47	0.000873224
PPP4R1L	7.27	0.004702169
PPP4R2	4.33	0.001809195
PPP6R3	4.25	0.001217803
PPWD1	4.39	0.000122056
PRAME	4.78	0.000115473
PRDM10	4.22	0.000755263
PRDM15	4.57	0.000274873
PRDM2	7.43	0.000142672
PRDM5	6.76	0.006065345
PRKAB2	4.85	0.000772972
PRKDC	7.23	0.001349361
PRKRIP1	6.12	0.000100217
PROM1	4.02	0.001531668
PRPF18	4.10	0.007317325

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PRPF3	5.33	0.001707739
PRPF38B	10.72	0.000517572
PRPF39	5.45	0.000364468
PRPF40A	6.00	0.000548502
PRPF40B	4.46	0.001427471
PRPF4B	7.99	4.34301E-06
PRPF8	4.32	0.009416128
PRR11	5.48	3.52192E-05
PRR14L	6.24	0.000566857
PRR19	7.06	0.002710213
PRR22	4.30	0.005833958
PRR4	6.82	0.000667151
PRRC2B	5.64	0.006791275
PRRC2C	7.36	6.59898E-05
PRRG4	5.84	0.004156153
PRRT1	4.72	0.000423423
PRRT3	4.59	0.006408787
PRSS22	5.10	0.007930947
PSD3	5.76	0.002927601
PSIP1	4.62	0.001130574
PSMC3IP	5.09	0.000239299
PSMC6	4.43	4.30176E-05
PSME4	4.50	0.001878314
PSMG4	6.51	0.000242275

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PTAR1	6.96	0.000218942
PTBP2	7.85	0.000261361
PTBP3	4.39	0.000848776
PTCD1	4.57	0.009374506
PTCD2	4.57	0.007811586
PTCD3	4.51	9.31141E-05
PTCHD4	16.65	0.002789793
PTER	5.90	8.50042E-05
PTGR2	7.21	0.005191825
PTPDC1	7.48	0.000700017
PTPLAD1	4.67	9.54738E-06
PTPN12	5.58	0.000124363
PTPN13	6.43	4.8322E-05
PTPN14	5.97	0.006074589
PTPN2	4.56	0.00032979
PTPN21	4.33	0.000910732
PTPN4	6.96	1.00009E-05
PTPRA	4.07	1.09816E-05
PTPRG	6.04	0.001033912
PTRH2	4.20	0.00424819
PURA	4.22	0.000301295
PUS3	7.01	0.002506893
PUS7L	7.01	8.12306E-05
PVT1	4.38	0.004215727

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
PWWP2A	4.42	6.17473E-05
PXK	5.26	0.009986941
PYGO1	5.35	0.008096052
PYROXD1	5.40	0.001914797
PYROXD2	6.37	0.009092211
QRICH2	4.06	0.002159243
QSER1	9.65	1.40113E-06
R3HCC1L	5.42	0.000772154
R3HDM1	8.23	1.01362E-05
RAB17	5.58	0.001714569
RAB22A	5.08	0.000244064
RAB3B	7.99	7.87835E-06
RAB3GAP2	4.68	0.000186375
RABEP1	4.90	0.000604877
RABGAP1	4.61	0.000116934
RABGAP1L	4.32	0.00018157
RAD17	4.72	0.001682406
RAD18	5.35	0.000226031
RAD21	4.23	5.78937E-05
RAD50	8.84	0.000100686
RAD51AP1	5.63	0.002633239
RAD52	4.25	0.000593627
RAD54B	4.47	0.000517017
RAD54L2	4.37	0.001785944

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RAD9A	4.47	0.006120313
RAET1K	7.90	0.002133528
RAI14	4.17	0.000249173
RALBP1	4.67	0.000113147
RALGAPA1	7.43	0.000918677
RALGAPA2	7.52	0.000335901
RALGAPB	5.34	0.000403899
RALGPS1	7.00	0.000171509
RALGPS2	4.48	0.002003719
RANBP17	5.59	0.00233066
RANBP2	7.37	7.65526E-05
RANBP6	5.50	0.000262139
RANBP9	4.11	0.000317189
RAP2A	4.02	0.003702358
RAPGEF2	5.54	0.000681463
RAPGEF5	4.78	0.004166194
RARS2	4.25	0.001572761
RASA1	5.87	0.000231235
RASA2	5.44	0.000996985
RASAL2	6.39	0.000259836
RAVER2	5.60	3.52192E-05
RB1CC1	11.00	3.53625E-05
RBAK	7.10	1.10209E-05
RBBP6	8.56	0.000147553

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RBBP8	5.80	0.000424551
RBBP9	5.62	0.002005997
RBL2	4.11	0.000530006
RBM12B	6.59	3.9773E-05
RBM19	4.57	0.008264008
RBM20	4.12	0.002403113
RBM25	5.67	0.000510576
RBM26	6.51	3.28568E-05
RBM27	6.22	7.02843E-05
RBM28	4.51	0.000113741
RBM33	5.58	0.000185472
RBM39	4.90	9.8831E-05
RBM41	14.74	0.000534013
RBM47	4.74	0.003590774
RBM5	5.06	1.55138E-05
RBM6	4.23	0.000100785
RBMS2	5.72	3.77849E-05
RBPMS	4.91	0.000160262
RC3H1	4.21	1.10541E-05
RC3H2	4.69	0.002141481
RCBTB1	4.89	0.000170891
RCOR3	4.35	4.99125E-05
RDM1	6.13	0.000869163
RDX	5.58	0.000501316

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RECQL	4.28	0.001589798
REEP3	4.19	0.000283986
REL	7.21	5.73681E-05
RELT	4.25	0.006151104
REST	4.98	0.002594694
REV1	7.17	2.33282E-05
REV3L	10.34	1.63637E-05
RFC1	5.64	0.000210213
RFC4	4.21	0.000801314
RFX3	6.35	0.000189796
RFX7	7.93	2.65222E-05
RG9MTD2	4.09	0.00392248
RGL3	7.19	0.005939678
RGPD2	6.62	0.001166462
RGPD4	5.57	0.002822553
RGPD5	5.59	0.003752136
RGPD8	6.13	0.001439817
RHBDL3	6.44	0.002960154
RHOBTB3	5.48	0.000665332
RIC8B	4.89	0.000460144
RICTOR	5.26	5.84467E-05
RIF1	7.04	0.00022366
RIMS3	4.99	4.38469E-05
RINT1	4.01	0.002976407

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RIOK1	5.73	0.00026267
RIOK2	5.94	9.09873E-05
RIT1	6.73	4.72551E-05
RLF	7.35	6.04758E-05
RMI1	4.49	0.002722974
RNASE1	11.61	0.002138296
RNASEH2B	5.97	0.001160345
RNASEH2C	4.05	0.001543661
RND3	4.80	0.005634995
RNF111	4.61	0.002594003
RNF121	4.64	0.008985183
RNF169	11.68	0.000474536
RNF20	4.67	0.000436968
RNF207	5.51	0.001897668
RNF213	8.47	0.005005281
RNF216	5.12	0.000108229
RNF217	7.34	3.80276E-05
RNF219	5.80	0.001786018
RNF32	9.26	0.000419693
RNF43	4.20	0.006616662
RNF6	6.35	0.00023108
RNPC3	10.71	0.000125272
ROBO3	5.29	0.001667728
ROCK1	8.50	1.34203E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ROCK2	7.20	0.00013323
RP1-101K10.6	4.39	0.004812513
RP11-1023L17.1	7.24	0.000209848
RP11-111M22.2	12.60	0.000884742
RP11-112J3.16	9.52	0.001702839
RP11-113K21.5	14.52	0.000307551
RP11-1149O23.2	10.77	0.002161143
RP11-114H23.1	8.94	0.001616165
RP11-114H23.2	6.69	0.003822193
RP11-1212A22.1	12.32	0.001508533
RP11-1277A3.1	22.82	0.009994528
RP11-1277A3.2	7.87	0.002666794
RP11-1319K7.1	10.52	0.000591668
RP11-13A1.1	11.10	0.001275611
RP11-1407O15.2	4.85	0.000120784
RP11-1415C14.4	5.61	0.002236522
RP11-144G6.12	16.33	0.00028736
RP11-145E5.5	5.53	0.000670152
RP11-14C22.4	7.83	0.00122153
RP11-152F13.3	5.26	0.001294777
RP11-152F13.5	34.23	0.000951667
RP11-152P17.2	10.93	0.000404343
RP11-156P1.3	5.35	0.001710896
RP11-159D12.2	10.21	0.001996728

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RP11-159D12.5	5.67	0.000502906
RP11-163O17.1	12.14	0.00233075
RP11-166D19.1	9.56	0.000133991
RP11-175I17.4	9.12	0.004748417
RP11-175P13.3	31.18	0.006510375
RP11-178A10.1	8.89	0.000379557
RP11-182J1.12	16.67	0.006867007
RP11-195E2.4	5.15	0.003025124
RP11-203I2.1	7.53	0.00181861
RP11-206L10.11	4.36	0.000847913
RP11-213H15.3	24.15	0.001154671
RP11-220I1.1	4.14	4.45661E-05
RP11-22B23.1	6.47	0.000138342
RP11-230G5.2	11.43	0.004707825
RP11-231C14.3	12.69	0.000706352
RP11-235E17.2	4.27	3.65522E-05
RP11-23J9.4	6.40	0.006478649
RP11-243J18.3	5.46	0.004104599
RP11-245J9.2	38.37	0.002483278
RP11-252A24.2	6.77	0.000165853
RP11-258C19.5	5.79	0.003481015
RP11-260O18.1	9.76	0.007833178
RP11-261C10.3	7.38	0.003018112
RP11-262H14.1	11.68	0.001668681

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RP11-262H14.3	6.56	0.00504556
RP11-267N12.3	7.51	0.004985238
RP11-268G12.3	7.79	0.001844089
RP11-273B20.1	10.64	0.00081894
RP11-282I1.1	9.99	0.008590265
RP11-282O18.3	6.59	0.00305998
RP11-290F20.1	8.06	0.004820385
RP11-291L22.3	7.91	0.000397093
RP11-292B8.1	5.83	0.001021168
RP11-295P9.3	18.10	0.001773934
RP11-296I10.3	4.51	0.001735017
RP11-296I10.6	4.91	0.004236893
RP11-297P16.4	5.40	0.00704193
RP11-304M2.2	5.14	0.001970061
RP11-307E17.8	5.72	0.003392218
RP11-315D16.2	9.10	0.002837439
RP11-31F15.1	8.43	0.006715091
RP11-322M19.1	4.28	0.001323317
RP11-324H6.6	27.87	0.00420227
RP11-327J17.3	5.98	0.000750027
RP11-330M2.7	7.25	0.007648045
RP11-333E1.1	12.09	0.003974142
RP11-334C17.5	8.90	0.008895254
RP11-33B1.1	7.99	0.004563306

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RP11-346D6.6	19.73	0.002633328
RP11-347C12.2	16.41	0.002056937
RP11-349A22.5	69.12	9.43556E-05
RP11-351I24.1	18.23	0.006680534
RP11-359M6.1	10.50	0.005610614
RP11-361F15.2	9.52	0.009966006
RP11-365P13.3	7.85	0.004869166
RP11-368J21.1	9.52	0.008910409
RP11-368J21.2	10.53	0.000136284
RP11-381O7.3	21.00	0.001901182
RP11-383C5.4	6.25	0.007779889
RP11-384F7.1	10.50	0.002970747
RP11-384K6.6	6.18	0.000142117
RP11-385D13.1	12.78	0.003403956
RP11-403I13.4	8.16	0.001807512
RP11-418J17.1	11.82	0.002762292
RP11-428C6.1	4.74	0.001417763
RP11-431J24.2	9.78	0.001513532
RP11-435O5.2	18.47	0.008318128
RP11-452J13.1	13.02	0.009734604
RP11-453F18_B.1	4.20	0.00136535
RP11-463D19.2	6.63	0.002344006
RP11-464F9.1	6.01	0.004515197
RP11-481A12.5	7.04	0.009350293

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RP11-488L18.4	12.35	0.003300967
RP11-401.2	6.28	0.00621581
RP11-502I4.1	7.55	0.005289674
RP11-508M1.3	8.45	0.003697947
RP11-513M16.2	4.54	0.002840351
RP11-517C16.2	5.63	0.005887918
RP11-521B24.3	10.80	0.004696946
RP11-521C20.4	5.15	0.001641679
RP11-531A24.5	246.03	1.64234E-05
RP11-556O5.3	22.81	0.002640227
RP11-564D11.3	12.43	0.000342812
RP11-575F12.1	30.78	0.006337648
RP11-578F21.5	9.59	0.007766387
RP11-588H23.3	6.53	0.008943716
RP11-589F5.4	13.43	0.005916296
RP11-58B17.1	9.52	0.002698939
RP11-596D21.1	9.09	0.002460607
RP11-632K20.7	9.46	0.002517124
RP11-644F5.10	15.98	0.000910165
RP11-645C24.1	17.60	0.001096967
RP11-64P12.8	4.56	0.000271675
RP11-696N14.1	10.06	0.000234661
RP11-706O15.3	5.15	0.000135614
RP11-710F7.3	5.74	0.006556347

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RP11-711M9.1	8.82	0.002719445
RP11-712L6.5	12.01	0.006194078
RP11-726G1.1	8.24	0.000874246
RP11-7306.4	4.38	0.003064403
RP11-761E20.1	11.82	0.000195077
RP11-795F19.1	8.19	0.005488204
RP11-81H3.2	20.99	0.000786537
RP11-846F4.12	15.06	3.64697E-05
RP11-856F16.2	27.85	0.001207234
RP11-85G18.6	13.24	0.002813056
RP11-877E17.2	19.17	0.001191385
RP11-87H9.3	6.55	0.008420825
RP11-890B15.3	9.82	0.002477887
RP11-90D4.2	5.31	0.000537177
RP11-958N24.1	6.26	0.000270446
RP11-96H19.1	9.23	0.000476071
RP11-974F13.6	11.11	0.004104707
RP1-199H16.5	6.93	0.001365869
RP13-131K19.2	18.47	0.008318128
RP13-178D16.2	6.41	0.005277407
RP13-507I23.1	12.21	0.002181052
RP13-977J11.2	23.51	0.001126328
RP1-63G5.5	4.82	0.006067393
RP1-80B9.2	12.34	9.9612E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RP1-90G24.10	7.65	0.006342442
RP3-340N1.2	8.27	0.001670937
RP4-594I10.3	6.13	0.000819971
RP4-671G15.3	5.79	0.00940947
RP4-694B14.5	6.28	0.005050125
RP4-717I23.3	13.00	0.006339928
RP4-758J18.2	4.53	0.001752781
RP4-785G19.5	7.62	0.000640957
RP4-798A10.2	20.57	0.000258495
RP4-798C17.5	12.89	0.00818611
RP4-798C17.6	13.47	0.000518188
RP5-1024G6.5	7.99	0.00144682
RP5-862P8.2	4.79	0.00111448
RP5-874C20.3	8.67	0.000382255
RP9	4.38	0.000858595
RPAIN	4.22	0.005902819
RPAP2	12.10	8.73478E-05
RPAP3	8.04	0.000590614
RPE65	6.02	0.001780536
RPGR	8.86	0.00158178
RPGRIP1L	7.01	8.58424E-05
RPL32P3	6.62	0.001453776
RPRD2	4.94	0.000283943
RPS6KA3	4.14	0.000215013

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
RPS6KC1	5.23	0.000436111
RRAGB	4.45	0.006534719
RRBP1	5.78	0.00032787
RREB1	4.44	0.001599696
RRN3P1	4.09	0.000822417
RRP7B	5.43	0.000167402
RRP8	7.97	1.22992E-05
RSBN1L	6.36	3.4275E-05
RSF1	7.07	0.001423436
RSL1D1	4.30	0.000687379
RSPH10B2	13.02	0.009734604
RSPH3	7.00	0.000286473
RSPH4A	18.71	0.000897066
RSPRY1	4.12	0.000767905
RSRC1	6.33	0.000104941
RSRC2	5.48	0.000352491
RTEL1_1	4.89	0.000643089
RTF1	4.06	0.000933383
RTKN2	4.43	0.003319802
RTTN	7.41	5.25548E-05
RUFY2	5.58	0.000275854
RUFY3	5.59	3.1512E-05
RWDD1	4.76	0.000714638
S100PBP	4.31	0.000703808

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SACM1L	4.02	0.003779522
SACS	9.84	0.000211791
SAFB2	4.49	0.001250316
SAMD15	4.52	0.003344168
SAMD3	4.86	0.003253976
SAMD5	8.25	6.54222E-05
SAMD8	5.64	0.000715709
SAMD9	10.35	3.3332E-05
SAP130	4.48	1.72462E-06
SASH1	4.34	0.005898792
SASS6	10.50	5.06118E-05
SAT1	5.33	0.001124791
SBF2	6.66	0.000311552
SBNO1	5.50	9.25769E-05
SBSPON	32.83	0.000226846
SCAF11	6.03	7.91869E-05
SCAF4	4.85	0.000154003
SCAF8	5.64	0.001095511
SCAI	6.53	0.00010577
SCAMP1	4.09	0.007372008
SCFD1	4.84	7.02179E-05
SCG2	4.58	3.74419E-05
SCLT1	8.10	0.00044055
SCMH1	6.44	4.638E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SCML1	8.89	0.001006595
SCN5A	9.07	0.000122804
SCN8A	6.49	0.000460209
SCYL2	4.15	0.004938542
SCYL3	6.22	0.000798099
SDAD1	4.27	0.000555977
SDCCAG8	5.16	0.000315275
SDHAP1	4.98	0.004245149
SDHAP3	10.03	0.000361139
SEC16A	4.88	0.005827757
SEC22C	4.45	0.003105361
SEC23IP	4.20	0.000522192
SEC24A	5.25	0.005030634
SEC24B	5.55	0.003474608
SEC31A	5.05	0.000282817
SEC31B	6.92	0.001460135
SEC62	7.64	0.000362035
SEC63	5.89	0.000102835
SECISBP2	4.69	0.00052757
SECISBP2L	5.69	0.000730184
SEL1L3	4.14	0.001218708
SEMA3C	5.86	0.000530712
SEMA6A	8.75	0.000195949
SENP1	5.35	1.30197E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SENP5	4.51	0.000195008
SENP6	6.80	7.00096E-06
SENP7	7.43	0.001015044
SEPT10	4.36	5.04315E-05
SEPT7	5.23	3.18077E-05
SESN1	4.22	0.000601418
SET	4.25	0.000308022
SETD2	7.03	0.000125414
SETD5	5.86	0.000694555
SETD6	5.51	0.000139157
SETX	7.65	0.000412974
SFI1	4.88	0.001757331
SFPQ	4.76	7.82002E-05
SGK494	18.90	0.009129851
SGOL1	6.85	0.000266593
SGOL2	16.51	1.73627E-06
SGSH	4.63	0.000390784
SGSM2	6.47	0.00088222
SGTB	5.65	0.000211283
SH2B1	5.68	5.16662E-05
SH2D4A	4.05	0.001258742
SH3D19	9.25	0.000137999
SH3D21	4.49	0.005350486
SH3PXD2A	4.60	4.22055E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SH3RF1	4.03	0.003137523
SH3TC2	6.54	4.36428E-05
SHANK3	5.76	0.005150603
SHOC2	4.18	1.81802E-05
SHPRH	5.99	7.23364E-05
SHROOM3	4.56	0.005765305
SIKE1	5.59	0.001335662
SIN3B	4.19	4.0995E-05
SIPA1L1	4.64	0.000158342
SIPA1L2	4.06	0.005929231
SIRT5	4.57	0.004022163
SIRT7	4.56	8.54063E-05
SIX4	4.19	7.67329E-05
SKA3	4.55	0.001244977
SKIV2L	4.40	0.006261616
SKIV2L2	4.94	0.000495329
SLC10A5	8.30	0.005814987
SLC12A8	5.22	0.000134726
SLC16A7	10.20	0.000246639
SLC17A9	5.01	0.001455494
SLC18A2	5.95	0.003497313
SLC1A3	5.16	0.000667814
SLC22A15	4.54	2.47517E-06
SLC22A23	6.99	0.001390175

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SLC22A5	4.54	0.000910163
SLC23A2	4.31	0.004718537
SLC24A1	5.02	0.00042656
SLC25A27	7.34	0.001462875
SLC25A29	9.87	0.000140856
SLC25A36	5.82	9.30273E-06
SLC25A37	6.45	0.00107231
SLC25A40	5.09	0.000229817
SLC25A46	5.29	0.001310513
SLC26A11	4.00	0.005857981
SLC26A2	4.86	0.000522673
SLC26A6	5.47	0.000349837
SLC2A13	5.50	0.000410001
SLC2A4	9.90	0.002685494
SLC2A6	4.39	0.003950113
SLC30A7	4.16	0.000190445
SLC35A1	4.54	0.000577341
SLC35A3	4.34	0.000485137
SLC35E2B	5.63	8.24436E-05
SLC35E3	7.12	0.001854669
SLC35F5	6.75	0.001884773
SLC35G1	6.05	0.001092321
SLC36A4	9.06	0.000809485
SLC37A1	4.11	7.0599E-06

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SLC38A1	4.46	0.000667568
SLC38A6	7.83	0.005838803
SLC38A7	4.78	0.004136078
SLC39A10	5.73	0.000183949
SLC39A6	4.19	0.000125264
SLC44A5	6.79	0.003229155
SLC45A3	4.34	0.00083317
SLC4A11	4.00	0.0005723
SLC4A1AP	4.54	9.96751E-05
SLC4A7	4.09	0.001777681
SLC5A3	9.36	0.007608827
SLC7A6	4.19	0.000484557
SLC7A8	4.29	0.007005519
SLC9A8	6.09	0.003004114
SLCO1B3	6.18	0.000433148
SLFN5	5.64	0.003327618
SLFNL1	7.28	0.002336991
SLK	7.77	7.10229E-05
SLMAP	6.69	7.83464E-06
SLTM	6.24	0.000366722
SLU7	4.24	0.000657185
SLX1A	4.75	0.005594604
SLX4	5.61	0.00326946
SMAD5	4.02	0.002762662

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SMAD9	17.02	0.000121641
SMARCA1	5.52	8.62129E-05
SMARCA4	4.06	0.005348762
SMARCA5	5.69	0.000349669
SMARCAD1	5.79	5.55499E-06
SMARCC1	4.83	0.001352911
SMARCE1	4.72	3.4459E-05
SMC1A	5.37	0.003767135
SMC2	6.05	1.45074E-05
SMC3	6.66	0.00021048
SMC4	11.13	1.94432E-06
SMC5	9.38	6.87413E-05
SMC6	7.03	0.000191535
SMCHD1	7.07	0.0009469
SMEK1	5.25	0.00028404
SMEK2	5.36	9.72527E-05
SMG1	7.53	0.000148551
SMG8	4.80	0.006348871
SMPD3	10.38	0.000686141
SMURF2	4.05	0.001002871
SMYD2	5.05	0.001528632
SMYD4	7.16	0.000376282
SNAP29	4.18	0.002564592
SNAPC1	7.22	3.11215E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SNAPC3	4.91	0.000385357
SNAPC4	4.48	0.000635615
SNRNP35	4.14	0.005378628
SNRNP48	4.48	0.004640441
SNTB2	5.67	0.001855749
SNX1	4.86	0.001925711
SNX13	6.31	0.000100507
SNX16	4.62	0.003241413
SNX33	7.89	0.003563716
SNX5	4.94	3.38258E-05
SOBP	5.58	0.00226545
SOCS4	7.41	3.48446E-05
SOGA1	4.85	0.008438803
SOGA2	5.59	0.00216635
SON	6.58	0.000330621
SORL1	4.25	0.008881146
SOS1	8.18	0.000273632
SOS2	4.72	0.000535743
SP100	6.48	0.001321407
SP110	4.01	0.005993578
SP4	6.42	0.000851322
SPA17	10.53	0.003601004
SPAG1	4.39	0.004713529
SPAG4	6.13	0.001471877

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SPAG5-AS1	8.78	0.001596097
SPAG9	5.96	0.001672824
SPATA13	6.06	0.000656071
SPATA5	4.55	0.000313937
SPATA6	5.38	0.001024564
SPATA7	5.64	0.000836528
SPDYA	5.93	0.007296004
SPDYE3	4.09	0.005597748
SPECC1	5.94	3.21227E-05
SPECC1L	5.14	0.000392889
SPEN	7.27	0.000305956
SPG11	5.34	4.96726E-05
SPG7	5.06	2.79352E-05
SPICE1	6.42	0.00104502
SPIN3	5.51	0.001122649
SPPL2B	6.61	0.001166136
SPTAN1	5.02	0.00590055
SPTB	4.27	0.008135288
SPTBN1	5.22	0.002522145
SPTLC2	4.00	0.00223287
SRBD1	4.31	0.000319147
SRCAP	4.78	0.001909881
SREK1	9.02	1.3336E-05
SREK1IP1	9.48	0.000570732

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SRFBP1	6.92	0.000898172
SRGAP1	4.56	0.003673699
SRGAP2	4.38	0.002073869
SRGAP2B	4.14	0.003369752
SRGAP2C	7.15	0.00120337
SRGAP3	4.99	0.00085294
SRP72	5.75	0.0001184
SRPK2	4.73	3.45847E-05
SRRM1	4.40	0.000434124
SRRM2	8.77	0.000369376
SRSF10	5.85	0.000119162
SRSF11	5.31	0.000165918
SS18L1	5.55	0.001671564
SSB	7.36	0.000368326
SSH2	4.43	0.009934088
STAG1	4.58	0.00253424
STAG2	5.04	0.000337556
STAG3L4	9.77	0.005420896
STAM2	4.37	0.005963905
STAMBPL1	5.33	0.000549806
STARD5	11.32	0.000274333
STARD9	7.38	0.000138225
STAT5B	6.45	0.001736723
STEAP2	5.67	0.000140196

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
STIL	4.61	0.00016199
STIM2	5.89	4.33871E-05
STK19	13.71	0.001906554
STK33	8.83	0.003432156
STK36	5.15	0.001061079
STK4	4.09	0.00043085
STON2	6.37	0.002056858
STOX2	5.13	0.001610583
STRBP	5.19	0.000401916
STRN	4.51	0.002143874
STX16	9.99	0.001406848
STX17	4.25	0.00057362
STX4	4.70	0.008542861
STXBP3	4.29	0.001114654
STXBP4	5.40	0.000181604
STXBP5L	6.67	0.000278324
STYK1	5.61	0.003931469
SUGP2	5.89	6.02008E-05
SULT1A1	4.90	0.005747725
SULT1A3_1	7.82	0.005983593
SULT1A4	6.60	0.000154687
SULT4A1	6.33	0.005255478
SUPT16H	4.34	0.000697427
SUPT7L	6.84	3.04298E-06

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
SUV39H2	5.11	0.000494149
SUV420H1	4.06	0.000276778
SUZ12	5.22	0.000825406
SUZ12P1	4.39	0.005234863
SV2A	14.83	0.001813754
SVIP	4.84	0.000421116
SWT1	5.06	0.007415832
SYCP2L	6.44	8.87762E-05
SYF2	4.29	0.003250643
SYNC	5.78	0.000119976
SYNE1	7.56	0.004013863
SYNE2	8.83	3.38839E-05
SYNGR1	5.98	0.003066828
SYNGR3	8.47	0.003133162
SYNJ1	4.98	0.00667372
SYNJ2	4.82	0.001054335
SYT1	5.74	0.000245631
SYT7	4.02	0.007203708
SYTL2	10.03	0.005049138
SZT2	6.30	0.000308107
TAB3	6.23	1.89892E-05
TACC1	4.30	0.000201424
TAF1	5.08	0.000844528
TAF1C	5.15	0.000610191

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
TAF2	4.73	0.000310208
TAF3	5.00	0.000375511
TAF4B	4.36	0.001339174
TAF7	4.55	0.000501293
TAMM41	4.69	0.008848578
TANC2	7.89	0.00121059
TANK	7.49	0.00043553
TAOK1	5.42	0.00067791
TARBP1	11.81	0.000195638
TAX1BP1	6.42	0.000304599
TBC1D12	4.72	0.004583665
TBC1D15	4.80	0.001720748
TBC1D19	4.71	0.002043254
TBC1D2	4.34	0.003597782
TBC1D23	4.78	0.000990531
TBC1D5	4.28	9.38193E-05
TBC1D8B	10.85	4.16215E-05
TBC1D9	4.82	0.001591635
TBCK	6.18	0.000769357
TBX4	13.02	0.009734604
TCAM1P	7.14	0.006153109
TCEAL4	5.85	0.001151807
TCERG1	7.17	5.46098E-05
TCF12	4.85	0.000196105

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
TCF20	5.38	0.001676623
TCHP	4.35	0.002446191
TCOF1	4.34	0.008643564
TCP11L1	4.07	0.001552889
TDRD3	5.64	0.000880845
TEAD1	5.38	0.002492635
TEC	5.33	0.000209949
TEP1	5.68	0.000156528
TERF1	5.31	0.001687182
TERT	5.43	0.007735293
TET1	9.50	0.000350908
TET2	10.42	1.80818E-06
TET3	4.73	0.001618543
TEX10	4.41	1.15949E-05
TEX9	17.87	0.000416908
TF	6.22	0.008519449
TFB1M	5.13	0.004893977
TFCP2L1	4.31	0.003122931
TFDP2	7.08	4.1601E-05
TFPI	7.63	0.000185645
TGFBR2	4.14	0.000207212
TGFBR3	5.56	0.006848015
TGS1	4.59	0.00111968
THADA	5.70	0.000237931

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
THAP2	7.06	0.002710213
THAP6	7.91	3.16765E-06
THAP8	14.39	0.004934867
THOC1	5.62	0.000279936
THOC2	5.99	0.00036443
THSD4	4.73	0.000908877
THUMPD2	6.17	8.16498E-06
THUMPD3	4.09	1.71974E-05
TIA1	4.32	0.001576647
TIGD1	13.38	0.000111673
TIGD2	4.75	0.001189442
TIMM21	4.21	0.002218044
TJAP1	5.26	0.002030793
TJP1	5.68	0.002037861
TLK1	4.86	0.000187779
TLK2	7.79	0.000605941
TLN2	4.52	0.008652031
TMA16	4.34	0.00806382
TMBIM4	10.06	0.001119924
TMC7	6.11	0.003622073
TMED5	4.63	0.000554014
TMEFF1	7.64	0.004882932
TMEM106B	4.39	0.001440069
TMEM123	4.29	0.000124545

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
TMEM126B	4.10	0.001222067
TMEM131	6.26	0.000666145
TMEM144	4.83	0.006041591
TMEM161B	7.14	0.004472228
TMEM161B-AS1	6.57	0.002786496
TMEM167A	4.15	0.000588333
TMEM168	6.31	0.001152949
TMEM184C	10.03	1.90462E-05
TMEM194A	5.09	8.21531E-05
TMEM198B	10.71	0.001748334
TMEM231	4.38	0.008178436
TMEM245	4.55	0.002569689
TMEM39A	4.10	5.85342E-05
TMEM44	4.10	0.000302551
TMEM50B	4.35	0.001953115
TMEM74B	7.26	0.005426832
TMF1	6.22	1.12562E-05
TMOD2	5.86	0.003364455
TMTC3	6.09	0.000205388
TMUB2	4.04	0.001456352
TMX2-CTNND1	4.89	0.00961935
TMX3	5.31	0.000172661
TNFAIP8	5.48	0.00119901
TNFRSF25	6.10	0.006020365

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
TNK2	4.15	0.002368204
TNRC18	4.87	0.004714636
TNRC6A	5.18	0.000452335
TNRC6B	6.38	0.001432393
TNS3	5.63	0.000996897
TOP1	5.03	0.000818339
TOP2A	4.79	0.00012999
TOP2B	5.11	0.000979471
TOP3B	4.53	0.000326176
TOPBP1	5.39	0.000477206
TOPORS	12.84	0.000103648
TP53BP1	5.32	0.000598317
TP53BP2	4.76	0.001581106
TP53I3	7.40	0.002979556
TPD52L1	4.02	0.000898423
TPM1	5.19	0.001243962
TPP2	5.14	0.0013254
TPR	8.02	3.94287E-05
TPT1-AS1	7.46	0.002342936
TRAF3	4.41	0.006196491
TRAF3IP2-AS1	5.45	0.00104291
TRAF3IP3	7.87	0.004425211
TRAF5	6.00	0.003118816
TRAK1	4.77	3.80807E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
TRAPPC8	5.35	1.80367E-05
TRIM13	5.27	0.000229433
TRIM24	4.75	0.000143573
TRIM27	4.75	0.000336341
TRIM3	6.41	0.000647932
TRIM33	4.60	0.000148036
TRIM37	5.03	0.000927812
TRIM38	7.58	0.000341403
TRIM4	4.72	0.001149915
TRIM44	5.15	0.002412234
TRIM66	9.47	0.000334881
TRIML2	6.83	0.007789881
TRIO	6.77	0.00157225
TRIP11	9.14	1.96869E-05
TRIP12	5.73	0.002002177
TRMT11	7.99	0.004385823
TRMT13	6.90	0.001630138
TRMT1L	4.73	5.2831E-05
TRMT44	4.30	9.83393E-05
TRMT5	8.14	0.000213232
TRMT6	5.30	0.003890838
TRMT61B	4.79	0.001164293
TRNAU1AP	4.46	0.004035955
TRNT1	5.49	0.000554907

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
TROAP	4.46	0.000616623
TROVE2	5.84	0.001415488
TRPM7	7.52	0.000818863
TRRAP	7.74	0.004225124
TSC1	4.63	0.004482279
TSEN2	5.33	0.000583201
TSHZ1	4.24	0.003925649
TSPAN11	10.50	0.005610614
TSSK3	4.92	0.002053462
TSTD2	5.05	0.000317332
TTBK2	5.26	0.00776808
TTC1	5.26	8.22181E-05
TTC14	14.40	5.22867E-05
TTC17	6.97	0.000556099
TTC18	7.31	0.003290691
TTC19	4.01	0.003235712
TTC21B	6.46	0.001190258
TTC22	14.83	0.001813754
TTC23	4.70	0.000926781
TTC3	7.42	1.67293E-05
TTC31	4.31	0.000170243
TTC37	8.71	3.74934E-05
TTC39B	4.52	0.000638499
TTF1	5.08	0.000353153

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
TTF2	4.77	0.000170577
TTK	5.07	0.002185377
TTLL3	14.13	0.001302462
TTLL4	4.03	0.000281965
TTLL5	4.47	0.000129159
TTLL6	4.80	0.001319014
TTLL7	5.73	0.001027731
TTN	9.23	0.001724329
TUBBP5	7.30	0.000235597
TUBGCP4	6.22	0.000175536
TUBGCP5	4.19	0.000311096
TUBGCP6	6.11	0.001506092
TUG1	8.21	0.002506322
TULP4	4.83	0.005563945
TWF1	4.02	0.001400288
TWF1P1	13.93	0.003775675
TWISTNB	4.49	1.8641E-05
TXK	12.87	0.001892276
TXLNG	6.18	0.001735801
TXNDC9	4.76	0.003865595
TYW3	6.14	0.000113992
TYW5	4.84	0.008950095
U2SURP	5.67	1.52503E-05
U47924.25	12.12	0.003113125

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
UACA	9.69	4.70809E-07
UBA6	4.80	0.002149244
UBAP2	4.61	0.001169074
UBE2G2	5.58	0.000895569
UBE2J1	4.60	0.001110707
UBE2Q2P3	8.21	0.00130642
UBE2V2	4.16	0.000826052
UBE3A	4.36	0.000710463
UBE3D	6.35	0.003542667
UBE4A	4.57	0.000101813
UBLCP1	5.35	1.78017E-05
UBN1	4.72	0.005514622
UBN2	5.75	0.000686686
UBR1	4.75	0.001797707
UBR2	4.14	0.001516748
UBR3	5.36	0.000142286
UBR4	7.59	0.001451715
UBR5	6.11	0.001267366
UBXN11	7.21	0.001629672
UBXN2A	4.14	0.001473751
UBXN2B	4.56	0.006397567
UBXN4	6.32	1.29411E-05
UBXN8	5.48	0.001037774
UCHL5	4.55	0.000277019

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
UEVLD	4.89	0.00105832
UFL1	6.05	4.42649E-05
UGGT2	7.19	0.000165878
UHRF1BP1	4.80	0.000611313
UHRF1BP1L	6.03	0.002532759
UHRF2	5.40	0.000687767
ULBP1	7.37	2.16435E-05
ULBP3	7.71	0.001492836
ULK2	4.27	0.004163075
ULK4P1_1	6.88	0.000826907
UNC13A	5.68	0.005698132
UNC13B	4.10	0.001945258
UPF2	4.97	0.00023772
UPF3A	4.47	5.58944E-06
UPP1	7.55	3.08823E-05
UQCRB	4.46	3.64335E-05
URB1	4.61	0.00378652
USO1	5.79	0.000394962
USP1	5.85	7.05895E-05
USP13	4.26	0.002550319
USP15	5.61	0.000102553
USP16	6.21	0.000533964
USP24	5.65	0.00069954
USP25	6.24	0.001130886

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
USP31	4.54	0.003318819
USP32	4.88	0.002248371
USP32P2	47.03	0.000519514
USP32P3	17.81	0.001041341
USP33	4.41	0.000182623
USP34	7.79	0.000150353
USP35	4.24	0.006679473
USP36	4.07	0.000204095
USP37	5.23	0.001574224
USP4	5.11	0.002005065
USP42	5.86	0.000391383
USP45	6.56	0.004015333
USP47	5.09	0.000319635
USP48	4.49	0.000240022
USP49	5.79	2.29642E-05
USP53	5.80	0.000259025
USP54	4.00	0.000162596
USP8	5.42	0.000319359
USP9X	7.00	0.001339407
USPL1	6.19	0.0002197
UTP14A	5.09	4.54522E-05
UTP14C	6.45	0.000107604
UTP20	6.13	0.000976851
UTP3	4.37	3.6482E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
UTRN	5.96	0.000150664
UTS2	7.60	0.003971828
VAMP4	17.79	5.89834E-05
VASH1	8.11	0.002772183
VASH2	5.65	0.002135597
VCAN	7.66	0.000356201
VCPIP1	4.55	0.002315892
VEGFA	5.30	3.94599E-05
VEZF1	6.60	0.000121675
VEZT	7.00	0.000220621
VIPR1	9.73	0.00048382
VPS13A	9.34	4.17697E-06
VPS13B	8.12	9.30883E-05
VPS13C	7.43	2.98871E-05
VPS13D	7.59	0.000375477
VPS29	4.55	7.15903E-06
VPS36	4.12	0.002199494
VPS37A	4.59	0.000139617
VPS54	4.82	0.001062736
VPS8	5.00	0.000405326
VRK2	5.28	0.00221559
VTI1A	4.54	0.000387893
VWDE	9.60	0.000117375
WAPAL	4.15	1.99448E-06

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
WARS2	13.65	0.00093521
WASH7P	7.57	0.001407949
WASL	4.32	0.006380222
WBP4	6.07	0.000181047
WBP5	4.36	0.003263558
WDFY2	4.52	0.003242891
WDFY3	7.02	0.000228592
WDHD1	5.14	9.946E-05
WDPCP	7.12	0.00053292
WDR11	4.97	5.64425E-05
WDR19	6.08	0.001025457
WDR27	5.87	0.000135082
WDR35	5.09	0.001502301
WDR36	4.41	0.001756962
WDR43	4.03	9.39117E-05
WDR45	5.39	0.002537161
WDR52	7.68	0.000750136
WDR55	4.30	0.001270672
WDR5B	4.54	0.002531481
WDR60	6.58	0.000242966
WDR67	4.25	0.001124721
WDR7	5.09	0.000439709
WDR72	6.25	0.001501901
WDR73	4.30	0.001707452

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
WDR75	5.52	0.000456541
WDR89	4.05	0.000684704
WDR96	6.05	0.007296635
WHAMM	5.03	0.000131449
WHAMMP3	6.28	0.003968478
WHSC1	4.05	0.00075402
WHSC1L1	5.46	0.000278669
WIPF3	4.15	0.00878197
WNK1	6.98	0.001503821
WNK4	4.00	0.004154064
WRN	7.90	0.000347857
WSB1	6.57	0.000700006
WTAP	4.22	0.000844647
WWC2	5.55	8.82068E-05
WWP1	4.09	2.91964E-05
XPC	4.14	0.000259681
XPO1	4.49	0.001425992
XPO4	4.32	0.00035099
XRCC2	18.00	0.001697879
XRN1	6.58	0.000120423
XRRA1	4.82	0.001718202
XXbac-BPG300A18.12	13.17	0.000875944
XXyac-YRM2039.2	5.24	0.000726493
XYLB	7.28	6.81532E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
YAE1D1	6.30	0.007424663
YBEY	4.09	0.00162593
YBX1	4.23	0.000653178
YBX2	7.27	0.006215876
YEATS2	4.55	0.000165494
YLPM1	5.10	0.000144653
YOD1	5.75	1.96026E-05
YTHDC1	4.08	0.00080334
YTHDC2	4.53	0.000163511
ZBED5	5.78	0.001257164
ZBTB2	4.18	0.001893293
ZBTB20	8.18	6.71108E-05
ZBTB24	4.01	0.000774056
ZBTB25	4.46	0.000180116
ZBTB26	6.71	0.002379694
ZBTB33	4.48	0.001031664
ZBTB37	5.21	0.008226639
ZBTB38	4.55	0.001895774
ZBTB40	5.22	1.61379E-05
ZBTB41	6.46	0.000203354
ZBTB44	4.69	6.73298E-05
ZC2HC1A	8.20	0.005647018
ZC3H11A	5.21	7.2721E-05
ZC3H12B	6.13	0.003359286

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZC3H12C	4.05	0.000837058
ZC3H13	7.82	7.8185E-05
ZC3H15	5.54	0.000218223
ZC3H6	5.80	0.002991178
ZC3H7A	4.17	0.00080891
ZC3HAV1	4.02	2.14953E-05
ZCCHC11	7.31	3.30822E-05
ZCCHC4	4.44	0.002590184
ZCCHC6	5.85	0.000236676
ZCCHC7	4.25	0.000274055
ZCCHC8	5.95	0.000430901
ZCCHC9	5.68	0.004802666
ZCRB1	4.70	0.0044551
ZCWPW1	6.74	0.006959996
ZDBF2	8.00	9.54743E-05
ZDHHC11	9.59	0.005491665
ZDHHC20-AS1	4.25	0.003389375
ZDHHC21	5.49	0.00684625
ZDHHC23	6.74	2.48475E-05
ZDHHC6	4.94	0.000309887
ZDHHC8	6.28	0.000113661
ZEB1	7.39	0.000285656
ZFAND4	4.22	0.004106318
ZFC3H1	7.23	1.08637E-05

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZFHX3	6.87	0.00051239
ZFHX4	8.80	2.32304E-05
ZFP106	5.71	0.000253336
ZFP14	7.17	0.003155473
ZFP30	6.30	0.006866282
ZFP41_2	5.52	0.005101149
ZFP62	4.81	1.36306E-05
ZFP90	6.26	0.00108944
ZFP91-CNTF	4.61	0.000189546
ZFPM2	24.62	0.006957266
ZFR	4.70	0.000145219
ZFX	4.07	0.001248548
ZFYVE16	5.71	0.001782857
ZFYVE26	5.10	0.001676677
ZGPAT	5.08	0.001158354
ZHX3	7.62	6.06981E-05
ZKSCAN1	4.92	0.000142892
ZMAT3	5.98	5.19858E-06
ZMYM1	4.70	0.001213249
ZMYM2	6.43	0.000553006
ZMYM4	5.40	0.001793114
ZMYND11	4.06	0.000882404
ZMYND8	5.15	0.000111142
ZNF100	8.02	0.002276802

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZNF101	4.10	0.005881232
ZNF107	11.66	1.69681E-05
ZNF117	21.82	4.66006E-05
ZNF121	7.07	0.001343121
ZNF131	6.39	0.000257249
ZNF132	10.39	0.000840122
ZNF133	8.95	0.004645298
ZNF137P	10.79	0.001263391
ZNF138	10.72	0.000374495
ZNF142	5.21	0.003125006
ZNF143	4.41	0.000140486
ZNF146	5.48	0.001406538
ZNF148	5.03	0.002311428
ZNF16	5.04	0.005109413
ZNF160	4.68	0.001167955
ZNF165	4.47	0.00276784
ZNF175	7.16	0.002165075
ZNF177	8.91	0.001187724
ZNF180	4.15	0.001349942
ZNF181	5.02	0.001915497
ZNF184	5.29	0.005501834
ZNF192	4.05	0.000168779
ZNF192P1	11.76	0.004963657
ZNF193	5.76	0.00368106

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZNF195	6.34	3.56705E-05
ZNF197	5.02	0.000836866
ZNF202	5.21	0.000105139
ZNF204P	11.39	0.000181785
ZNF211	6.96	0.00257795
ZNF214	11.38	0.00143635
ZNF215	8.36	0.000166766
ZNF221	12.54	0.00395443
ZNF222	11.54	0.004033263
ZNF224	5.87	0.007904041
ZNF226	5.50	0.000111376
ZNF23	12.33	6.92846E-05
ZNF233	10.50	0.001369647
ZNF235	6.00	0.006004192
ZNF236	6.53	0.001791311
ZNF239	4.29	0.005135831
ZNF248	5.83	0.002717311
ZNF251	6.66	0.001690363
ZNF252P	4.64	0.001307552
ZNF254	4.98	0.000681052
ZNF26	4.95	0.002380131
ZNF266	6.19	0.001331484
ZNF267	7.81	9.04033E-05
ZNF268	6.54	0.000251653

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZNF271	4.92	5.4143E-05
ZNF273	5.31	0.002278876
ZNF274	4.85	0.001679511
ZNF275	5.34	0.000712308
ZNF276	5.41	0.000409385
ZNF28	5.85	0.003798238
ZNF280B	4.19	0.001147142
ZNF280C	5.35	0.000340038
ZNF280D	7.21	9.77456E-05
ZNF281	6.10	6.11473E-05
ZNF283	6.51	0.007166498
ZNF285	5.31	0.0056102
ZNF286B	6.15	0.000213849
ZNF292	9.28	0.0001141
ZNF295	5.17	0.000144218
ZNF3	5.44	0.0006263
ZNF302	9.68	0.000417753
ZNF318	4.58	0.00016363
ZNF320	6.10	0.004132214
ZNF326	6.24	0.000135154
ZNF337	7.31	0.000173579
ZNF33A	8.67	0.000120844
ZNF33B	8.89	4.04758E-05
ZNF34	4.68	0.001001811

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZNF341	6.47	0.009524251
ZNF367	4.25	0.000712156
ZNF37A	14.69	0.000250947
ZNF37BP	15.67	6.51487E-05
ZNF385B	4.16	0.001359006
ZNF391	17.65	0.008227793
ZNF397	8.69	0.000283213
ZNF407	5.07	0.000125547
ZNF41	5.68	0.000841188
ZNF430	4.65	0.005137381
ZNF431	8.67	0.000125922
ZNF44	11.20	0.003895262
ZNF441	9.76	0.001406264
ZNF451	5.40	1.9975E-06
ZNF462	7.07	0.00138471
ZNF480	14.12	0.000375709
ZNF483	4.90	0.002015563
ZNF485	7.11	0.000147899
ZNF498	5.69	0.000918385
ZNF507	4.95	0.000407429
ZNF510	9.18	1.78246E-05
ZNF512	4.18	0.001219691
ZNF514	4.41	0.006929067
ZNF518A	8.94	6.59252E-07

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZNF518B	4.07	0.000479504
ZNF519	6.44	0.001078819
ZNF525	10.03	0.000277901
ZNF528	18.23	0.006680534
ZNF530	5.11	0.007816503
ZNF532	7.39	0.001533297
ZNF552	6.22	0.006313371
ZNF554	7.63	0.005564641
ZNF557	5.19	0.001748385
ZNF558	5.27	0.003280999
ZNF562	4.48	0.000155409
ZNF566	5.74	0.000377682
ZNF567	6.28	9.75744E-05
ZNF584	4.17	0.006089832
ZNF589	7.91	2.38325E-05
ZNF592	4.40	0.003812809
ZNF594	6.25	0.000389166
ZNF595	8.26	0.000580404
ZNF600	7.60	1.99667E-06
ZNF611	4.07	0.002535516
ZNF614	6.95	4.94441E-05
ZNF618	5.70	0.009894899
ZNF621	11.71	0.004734013
ZNF638	6.67	5.57805E-06

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZNF644	5.51	1.25758E-05
ZNF646	4.33	0.001813248
ZNF652	4.17	0.000189705
ZNF655	8.11	2.82317E-05
ZNF658	10.23	0.001090937
ZNF66P	10.50	0.005610614
ZNF673	5.03	0.005298522
ZNF674	8.47	0.003251096
ZNF675	22.48	0.002895786
ZNF678	4.04	0.001565515
ZNF680	6.00	0.000690694
ZNF681	12.87	0.009919605
ZNF684	4.08	0.005690525
ZNF692	5.59	0.002400749
ZNF7	6.24	0.000417276
ZNF700	7.23	0.00036351
ZNF704	7.21	0.000507437
ZNF708	13.84	9.23608E-06
ZNF711	6.65	0.001228184
ZNF714	4.85	0.000669823
ZNF720	10.66	0.000170624
ZNF721	6.13	0.005204716
ZNF724P	9.43	0.000671385
ZNF738	5.63	0.004050308

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZNF75A	6.56	0.000854913
ZNF75D	6.88	0.008741671
ZNF761	6.58	0.002482139
ZNF765	7.67	0.000722794
ZNF766	8.40	0.003121132
ZNF767	8.70	0.000926282
ZNF77	4.44	0.002668738
ZNF770	4.80	0.000246368
ZNF774	11.57	0.002524213
ZNF780A	7.66	0.000607966
ZNF780B	12.32	7.86443E-05
ZNF782	13.38	0.00013485
ZNF783	4.63	0.000829624
ZNF789	7.79	0.001719293
ZNF799	5.13	0.002687263
ZNF8	4.92	0.000295158
ZNF800	6.88	0.000114235
ZNF805	4.11	0.000656739
ZNF808	6.61	0.000976839
ZNF81	7.29	0.003775389
ZNF814	6.35	7.01942E-06
ZNF827	5.23	0.004370136
ZNF83	12.91	7.95533E-05
ZNF833P	5.66	0.001273938

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value
ZNF839	4.42	0.001246273
ZNF84	7.30	0.002270052
ZNF845	4.60	0.0024785
ZNF85	7.66	0.004806563
ZNF852	4.64	0.003310046
ZNF862	8.45	0.003294334
ZNF91	9.89	0.00015148
ZNF92	7.00	0.002974162
ZNFX1	4.18	0.00120629
ZNHIT6	4.03	0.00088459
ZNRD1-AS1	7.51	0.001195621
ZRANB2	5.96	5.35371E-05
ZRANB3	6.81	0.000457753
ZSCAN29	5.14	0.000248709
ZSCAN30	21.34	0.004967307
ZSWIM6	4.96	0.000564102
ZUFSP	5.04	0.002130254
ZWILCH	4.46	0.002300157
ZXDC	4.42	0.000407867
ZYG11B	4.01	0.002083871
ZZEF1	5.79	0.001705425
ZZZ3	5.58	3.24734E-06

Table S2. List of mRNAs regulated by hnRNP G-T.

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
AATK	-13.60	0.00114
ABC7-42389800N19.1	-5.69	0.00391
ABCA17P	-10.40	0.00291
ABCA2	-5.21	0.00587
ABCA7	-5.39	0.00763
ABCB8	-5.65	0.00768
ABCC3	-7.19	0.00116
ABCD1	-7.61	0.00662
ABHD16B	-7.75	0.00059
ABHD2	-5.02	0.00509
ABL1	-4.93	0.00469
ABRACL	-4.86	0.00961
ABT1	-4.49	0.00678
AC005280.1	-10.07	0.00482
AC006946.15	-9.74	0.00974
AC007405.4	-5.97	0.00939
AC007566.10	-6.05	0.00694
AC007663.1	-7.86	0.00682
AC008280.5	-4.12	0.007
AC009237.8	-7.90	0.0013
AC009502.3	-7.55	0.00856
AC010132.11	-4.30	0.00727
AC011443.1	-7.32	0.00211

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
AC011498.1	-12.07	0.000794
AC013268.3	-8.33	0.004745
AC013268.5	-6.01	0.008139
AC016722.2	-19.48	0.005251
AC017099.3	-5.26	0.009958
AC020910.2	-6.90	0.006302
AC021218.2	-13.13	0.000428
AC022210.2	-36.30	0.00126
AC073346.2	-9.73	0.005301
AC087650.2	-7.63	0.002736
AC093627.9	-8.34	0.007663
AC103564.7	-14.45	0.000417
AC103965.1	-4.86	0.008647
AC104389.28	-5.32	0.004051
AC105344.2	-8.91	0.000761
AC145291.1	-15.21	0.004313
AC159540.2	-9.96	0.001229
ACAD9	-5.14	0.009258
ACADS	-5.44	0.007043
ACD	-5.17	0.008221
ACLY	-9.24	0.000935
ACOT11	-6.33	0.005909
ACOX2	-11.27	0.002336

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
ACPL2	-7.20	0.00839
ACSF3	-5.69	0.00661
ACTN4	-6.58	0.00321
ACTR3C	-5.78	0.00296
ADAM11	-5.91	0.00749
ADAM8	-6.91	0.00432
ADAMTS10	-7.79	0.00274
ADAMTS7	-5.91	0.00861
ADAP1	-10.75	0.00719
ADCK4	-5.19	0.00747
ADCY3	-5.26	0.00716
ADCY7	-6.33	0.00211
ADD3	-5.06	0.00938
ADORA2A	-6.17	0.00254
ADRA2B	-5.26	0.00786
ADRA2C	-7.60	0.00219
ADRM1	-5.43	0.00549
AES	-5.20	0.00962
AFAP1L1	-5.61	0.00686
AGAP10	-34.30	0.00199
AGAP3	-5.60	0.00399
AGRN	-7.51	0.00097
AHCY	-5.63	0.00513
AHDC1	-5.80	0.00585

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
AHRR	-5.76	0.002885
AHSA1	-4.99	0.00742
AK7	-4.76	0.002457
AKAP17A	-6.70	0.002378
AKAP2	-5.50	0.00498
AKAP8	-5.78	0.004754
AKNA	-6.14	0.002876
AKR1E2	-5.28	0.008416
AKR7A2	-6.39	0.005265
AKT1	-5.21	0.004571
AKT3	-4.07	0.008563
AL357673.1	-7.39	0.007073
ALDH16A1	-5.27	0.006806
ALDH4A1	-8.13	0.001544
ALDH5A1	-4.33	0.005849
ALG10	-10.10	0.003318
ALG12	-7.59	0.003427
ALKBH7	-6.01	0.009689
ALPL	-9.64	0.006752
AMDHD2	-5.08	0.008539
AMH	-8.03	0.001291
AMIGO2	-6.92	0.004093
AMOTL2	-6.42	0.003518
AMT	-5.86	0.0056

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
ANAPC11	-6.15	0.00324
ANAPC15	-5.15	0.0074
ANAPC2	-5.61	0.00592
ANGPTL4	-6.87	0.00406
ANKLE1	-4.03	0.00987
ANKRD13B	-9.67	0.00153
ANKRD19P	-5.19	0.00984
ANKRD30BL	-7.43	0.00668
ANKRD34A	-7.41	0.00259
ANKRD39	-5.79	0.00052
ANKRD40	-4.67	0.00999
ANKRD9	-5.66	0.0091
ANKS6	-5.18	0.00757
ANO8	-5.39	0.00451
ANO9	-5.43	0.00549
ANXA11	-5.07	0.00804
ANXA2	-5.68	0.0032
AP000251.2	-27.36	0.00539
AP003068.6	-6.70	0.00171
AP2S1	-6.51	0.00989
AP5Z1	-6.00	0.00471
APBA2	-15.46	0.00667
APBA3	-5.12	0.00956
APBB1	-6.79	0.00621

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
APH1A	-4.94	0.009794
APITD1	-6.30	0.002415
APOL2	-4.39	0.009022
APRT	-5.52	0.00898
ARF5	-4.98	0.009662
ARFRP1	-7.10	0.003409
ARHGAP23	-6.87	0.002326
ARHGAP4	-6.68	0.00221
ARHGAP40	-4.83	0.00895
ARHGAP8	-10.85	0.005069
ARHGEF10L	-5.89	0.009474
ARHGEF16	-6.33	0.008032
ARHGEF17	-4.72	0.004915
ARHGEF18	-4.83	0.008973
ARHGEF37	-7.32	0.004093
ARHGEF40	-7.75	0.001275
ARID1A	-4.66	0.00931
ARID5A	-9.21	0.000271
ARL1	-5.65	0.003821
ARL16	-4.14	0.007737
ARMC3	-5.72	0.003675
ARMC5	-6.23	0.001528
ARMC6	-5.34	0.00771
ARMC9	-5.50	0.007029

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
ARPC1B	-7.20	0.00398
ARRDC1	-5.42	0.00738
ARSJ	-5.57	0.00421
ARVCF	-6.43	0.00452
ASAP2	-5.32	0.00899
ASIC3	-8.43	0.00421
ASPSCR1	-5.57	0.00461
ATAD3A	-5.19	0.00613
ATAD3B	-4.05	0.00437
ATG16L2	-6.90	0.00374
ATHL1	-5.85	0.00998
ATN1	-7.47	0.00099
ATP13A1	-4.92	0.00723
ATP13A2	-6.21	0.00455
ATP2A1	-5.20	0.00911
ATP2A3	-6.72	0.00141
ATP5D	-6.87	0.00378
ATP5G1	-5.31	0.00694
ATP5G2	-5.26	0.0097
ATP6V1F	-5.55	0.0099
AURKAIP1	-6.19	0.00255
AVPI1	-6.66	0.00384
AXL	-5.40	0.004
AZI1	-8.72	0.00361

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
B3GAT3	-5.52	0.005302
B3GNT7	-6.39	0.006074
B4GALNT4	-7.80	0.006263
B4GALT2	-5.41	0.007239
B4GALT6	-5.47	0.007722
BAD	-8.09	0.00275
BAG3	-7.93	0.001708
BAHCC1	-6.92	0.002648
BATF3	-7.17	0.006569
BBS1	-11.63	0.002514
BCAM	-11.44	0.004593
BCAN	-7.18	0.003922
BCAR1	-5.67	0.005189
BCAR3	-5.24	0.005682
BCKDK	-6.90	0.004143
BCL2	-6.48	0.008827
BCL2L1	-5.74	0.004958
BCL2L12	-6.49	0.003062
BCL3	-10.54	0.000723
BCL9L	-5.97	0.002977
BCOR	-5.20	0.007791
BCRP2	-5.83	0.004151
BCS1L	-5.89	0.004263
BHLHA15	-14.77	6.56E-05

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
BIN1	-5.80	0.00587
BIN3	-4.76	0.00802
BLVRB	-4.75	0.00254
BMP1	-5.96	0.00525
BMP8A	-7.07	0.00356
BMP8B	-5.83	0.00774
BOP1	-5.13	0.00864
BRAT1	-5.56	0.00657
BRD4	-5.16	0.00524
BRI3	-6.32	0.00431
BRPF3	-7.47	0.00227
BRSK1	-6.60	0.00661
BTBD1	-6.07	0.00553
BTBD2	-6.69	0.00155
BTBD3	-5.19	0.00728
BTN1A1	-7.71	0.00336
BX571672.2	-9.74	0.00974
C10orf47	-4.75	0.00764
C11orf24	-4.57	0.00812
C11orf31	-6.42	0.00788
C11orf41	-15.05	0.0005
C11orf84	-5.46	0.00592
C11orf9	-9.10	0.00552
C12orf44	-4.83	0.00725

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
C12orf45	-5.46	0.007991
C12orf52	-7.63	0.003292
C12orf57	-5.35	0.003123
C12orf75	-4.86	0.009693
C14orf43	-4.79	0.00794
C14orf80	-6.43	0.002538
C16orf13	-4.44	0.00411
C16orf59	-6.64	0.001947
C16orf74	-5.77	0.006228
C17orf67	-5.49	0.004498
C17orf90	-6.37	0.003166
C17orf99	-7.71	0.00336
C19orf10	-4.67	0.006694
C19orf21	-8.88	0.001071
C19orf25	-7.76	0.001169
C19orf26	-5.94	0.005094
C19orf33	-5.96	0.005804
C19orf40	-5.22	0.005982
C19orf43	-4.24	0.009271
C19orf48	-5.82	0.005507
C19orf6	-5.58	0.005157
C19orf60	-7.28	0.004622
C19orf66	-4.64	0.007504
C19orf68	-5.07	0.007003

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
C19orf76	-10.09	0.00169
C1orf159	-7.59	0.00277
C1orf162	-7.23	0.00429
C1orf233	-5.44	0.00479
C1orf43	-5.17	0.00433
C1orf88	-16.85	0.004
C1QL4	-6.10	0.00487
C1QTNF1	-16.78	0.00011
C1QTNF6	-6.03	0.0029
C1RL	-4.67	0.00791
C20orf132	-8.81	0.00505
C20orf3	-7.25	0.00306
C21orf2	-5.40	0.0076
C21orf67	-5.22	0.00422
C22orf43	-33.29	0.00043
C22orf45	-24.98	0.00082
C2CD4C	-11.39	0.00051
C2orf18	-6.39	0.00487
C2orf48	-11.31	0.00092
C2orf89	-4.77	0.00607
C3orf24	-28.53	0.00463
C3orf80	-8.28	0.00193
C5orf30	-5.46	0.00532
C5orf65	-7.95	0.00843

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
C6orf1	-5.15	0.004453
C6orf72	-6.19	0.001338
C7orf50	-4.72	0.009372
C8orf73	-4.70	0.009067
C8orf82	-4.39	0.007509
C9orf16	-6.02	0.007775
C9orf86	-7.18	0.005868
C9orf9	-9.01	0.000398
CA11	-15.38	0.005066
CA13	-4.69	0.007275
CA5BP1	-5.94	0.002791
CABLES2	-5.52	0.007541
CACNA1D	-8.18	0.001433
CACNA1H	-5.96	0.005485
CACNA1I	-10.23	0.000925
CACNA2D2	-4.63	0.005986
CACNB3	-5.97	0.008672
CACTIN	-5.24	0.00955
CALD1	-6.26	0.006425
CALR3	-8.27	0.003682
CAPN1	-6.57	0.006533
CAPN5	-4.84	0.007584
CARD10	-7.32	0.002318
CARD9	-9.73	0.000712

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
CARHSP1	-5.03	0.0015
CASKIN1	-12.18	0.00045
CASKIN2	-5.44	0.00402
CASZ1	-4.71	0.00712
CATSPER1	-15.30	0.00271
CAV2	-6.36	0.00324
CBL	-7.52	0.00275
CBLC	-6.85	0.00528
CBX4	-4.78	0.00757
CCDC102A	-8.56	0.00026
CCDC113	-5.01	0.00791
CCDC114	-9.51	0.00403
CCDC124	-9.90	0.00206
CCDC130	-5.04	0.00982
CCDC136	-8.33	0.00266
CCDC137	-5.61	0.00553
CCDC142	-4.70	0.00587
CCDC148	-7.63	0.00828
CCDC157	-14.05	0.00059
CCDC19	-11.03	0.00611
CCDC3	-6.08	0.00313
CCDC48	-7.61	0.00989
CCDC57	-6.14	0.00251
CCDC64B	-7.66	0.00059

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
CCDC69	-4.97	0.007295
CCDC78	-5.84	0.005894
CCDC85B	-12.28	0.004467
CCDC85C	-5.35	0.009016
CCDC9	-6.67	0.006184
CCHCR1	-5.27	0.006904
CCL26	-7.71	0.00336
CCND1	-5.88	0.002337
CCND3	-7.56	0.001413
CCNE2	-5.92	0.007502
CCNJ	-5.77	0.009984
CCNO	-5.21	0.006867
CCRN4L	-6.47	0.005794
CD22	-8.56	0.003502
CD276	-5.63	0.005487
CD2AP	-7.44	0.005498
CD2BP2	-4.99	0.0083
CD320	-6.31	0.00799
CD68	-4.98	0.004399
CD9	-5.27	0.004125
CD99	-4.85	0.006372
CDC25B	-5.78	0.004383
CDC37	-8.10	0.002388
CDC42EP1	-7.09	0.00255

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
CDC6	-4.72	0.00735
CDH24	-5.48	0.00674
CDH3	-5.41	0.00623
CDK10	-4.90	0.00798
CDK11A	-5.44	0.00619
CDK11B	-6.36	0.00406
CDK5	-5.37	0.00451
CDKL5	-6.09	0.0094
CDS1	-6.07	0.00719
CDT1	-6.21	0.00316
CEBPA	-11.43	0.00723
CEBPB	-4.49	0.00545
CEL	-19.71	0.0004
CELF5	-5.50	0.00756
CELSR1	-5.35	0.00921
CEND1	-8.33	0.00475
CENPB	-5.35	0.00432
CENPBD1	-6.40	0.00426
CENPT	-6.02	0.0069
CENPV	-4.81	0.00801
CEP19	-18.08	0.00187
CES3	-8.67	0.00115
CFP	-14.50	0.00434
CGB1	-6.42	0.00572

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
CGN	-6.39	0.003931
CHAF1A	-6.28	0.005104
CHAF1B	-5.10	0.007797
CHCHD6	-6.66	0.008519
CHCHD8	-5.28	0.001779
CHD5	-4.85	0.006494
CHID1	-4.75	0.009955
CHMP6	-9.58	0.00101
CHPF2	-5.00	0.00925
CHST11	-5.47	0.00737
CHST12	-4.64	0.009488
CHST14	-7.07	0.008751
CHST7	-6.83	0.005696
CHTF18	-8.46	0.001547
CHURC1	-6.47	0.005594
CIB2	-4.78	0.008046
CILP2	-5.21	0.005274
CISD3	-4.83	0.009511
CITED2	-5.23	0.006352
CKB	-5.03	0.009724
CKLF	-5.77	0.006098
CLASRP	-8.97	0.002432
CLCF1	-13.30	0.00536
CLDN4	-8.11	0.000963

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
CLDND1	-6.75	0.0026
CLEC2L	-15.55	0.00854
CLIC3	-9.07	0.0004
CLIP3	-6.75	0.00167
CLK2	-5.32	0.00745
CLPB	-7.00	0.00162
CLSTN3	-6.37	0.00571
CLTB	-5.90	0.00796
CLU	-7.26	0.00445
CNOT3	-5.24	0.00746
CNPY2	-5.06	0.00929
COL11A2	-5.85	0.00445
COL16A1	-11.14	0.00222
COL18A1	-8.15	0.00257
COL27A1	-6.01	0.00629
COL6A1	-6.83	0.00213
COL6A2	-10.40	0.00116
COL7A1	-7.80	0.00473
COL9A3	-9.63	0.0029
COMMD4	-6.11	0.00577
COMTD1	-8.60	0.00145
CORO1B	-7.65	0.0009
CORO2B	-7.04	0.00581
CPNE2	-7.19	0.00304

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
CPNE7	-6.80	0.002941
CPSF1	-6.31	0.005924
CPSF3L	-4.35	0.009336
CPT1C	-6.25	0.007286
CPZ	-15.55	0.000249
CRADD	-4.88	0.004463
CRIM1	-6.26	0.002953
CRIP2	-8.26	0.004788
CRISPLD2	-6.73	0.002782
CROCC	-6.11	0.00333
CSF1	-6.86	0.008377
CSF3R	-11.57	0.000814
CSNK2A1	-5.63	0.007484
CSPG4	-7.29	0.001901
CSPG5	-4.68	0.007897
CSRNP1	-5.87	0.006164
CST6	-7.35	0.001763
CSTA	-29.12	0.001637
CSTB	-6.56	0.002345
CTC-308K20.1	-12.40	0.006517
CTC-435M10.3	-4.53	0.007753
CTC-786C10.1	-10.76	0.00474
CTD-2228K2.5	-12.13	0.007461
CTD-2267D19.3	-7.53	0.007157

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
CTD-2323K18.1	-5.12	0.00531
CTD-2545G14.7	-4.14	0.00167
CTD-2547E10.3	-6.19	0.0099
CTD-2561B21.9	-4.76	0.00373
CTD-3193O13.2	-49.44	0.00839
CTDSPL	-6.61	0.00379
CTSD	-5.84	0.00518
CTTN	-4.99	0.00897
CTU2	-6.07	0.00376
CUEDC1	-7.76	0.00188
CUTC	-4.91	0.00775
CXCL16	-6.00	0.00078
CYB5D1	-9.72	0.00017
CYB5RL	-15.92	0.00012
CYBA	-6.85	0.00147
CYP1A1	-7.58	0.00203
CYP24A1	-8.26	0.00249
CYP26B1	-7.74	0.00576
CYP2D7P1	-9.54	0.00416
CYP4F11	-6.91	0.00167
CYP4F22	-7.05	0.00305
CYR61	-4.60	0.00732
DAB2	-5.07	0.0069
DAB2IP	-6.06	0.0036

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
DAGLA	-6.46	0.004738
DAK	-6.66	0.00301
DAPK2	-4.27	0.005128
DAPK3	-7.33	0.002151
DBP	-11.74	0.003665
DCAF15	-6.41	0.003459
DCAKD	-6.71	0.00407
DCDC2B	-9.63	0.001474
DCPS	-4.59	0.008143
DCTD	-4.74	0.007425
DCTPP1	-8.86	0.001261
DCXR	-4.91	0.003448
DDR1	-6.86	0.003392
DDRGK1	-5.98	0.00991
DDX11L1	-5.43	0.003349
DDX11L9	-12.16	0.005884
DDX49	-5.93	0.00589
DDX51	-4.70	0.009059
DEDD2	-4.66	0.009504
DEGS1	-6.06	0.002476
DENND4B	-4.70	0.009724
DGCR6L	-6.66	0.00474
DGCR8	-5.28	0.008278
DHCR7	-5.53	0.008782

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
DHPS	-5.22	0.00701
DHRS3	-8.00	0.00165
DHX30	-4.99	0.00856
DHX34	-6.28	0.005
DHX58	-25.29	0.00012
DIP2C	-6.17	0.00477
DIRAS1	-7.84	0.00153
DLGAP4	-5.19	0.00829
DLK2	-4.23	0.00624
DLX2	-8.51	0.00053
DMD	-8.33	0.00475
DMPK	-7.63	0.00279
DMWD	-6.46	0.00213
DNAJB1	-6.67	0.0029
DNAJB4	-6.05	0.00663
DNAJC11	-4.80	0.00979
DNAJC17	-5.42	0.00161
DNAJC4	-6.57	0.00412
DNASE1L1	-4.88	0.00793
DNASE1L2	-6.46	0.00577
DNM2	-5.80	0.00695
DOC2A	-4.58	0.00895
DOC2B	-9.32	0.00404
DOHH	-6.30	0.0019

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
DPP7	-7.29	0.003366
DRAP1	-7.25	0.004901
DUS3L	-6.50	0.003316
DUSP2	-5.93	0.009488
DUSP5	-5.19	0.004934
DVL1	-6.54	0.002483
DVL2	-4.64	0.006416
DYNLT3	-5.41	0.003281
E2F1	-5.67	0.007443
E4F1	-7.07	0.002285
ECHS1	-4.69	0.006625
ECI1	-6.03	0.002484
ECSIT	-4.88	0.009904
EEF1D	-6.45	0.004207
EEF2	-6.08	0.004769
EFCAB4B	-5.05	0.007887
EFR3A	-7.03	0.008819
EGFL7	-9.31	0.000517
EGLN2	-5.93	0.004445
EGR4	-48.71	0.003074
EHBP1L1	-5.75	0.006521
EHD1	-6.49	0.002311
EHD2	-5.02	0.006602
EIF2C2	-5.09	0.007755

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
EIF3B	-4.89	0.00778
EIF4EBP1	-5.94	0.00904
EIF4G1	-6.08	0.00599
EIF5A2	-6.03	0.00957
EIF6	-6.23	0.0082
ELK3	-10.38	0.001
ELMO2	-8.48	0.00237
ELOF1	-4.93	0.00737
EMC10	-5.64	0.00554
EMC7	-12.72	0.0001
EMC9	-7.20	0.00097
EML6	-5.80	0.00448
EMP1	-7.55	0.00078
ENDOV	-4.60	0.00451
ENO3	-6.81	0.00816
ENTPD2	-4.29	0.0055
ENTPD7	-5.33	0.00631
EOGT	-5.83	0.00762
EPB41L4B	-5.02	0.00781
EPB49	-5.79	0.00541
EPDR1	-14.07	0.00203
EPHA1	-6.60	0.00266
EPHA10	-6.88	0.0027
EPHA2	-6.18	0.00362

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
EPHB2	-5.87	0.004631
EPHB6	-6.52	0.008069
EPN1	-7.00	0.00367
EPPK1	-5.24	0.006728
EPS8L1	-6.18	0.000968
ERCC1	-5.57	0.002977
ERF	-7.84	0.004634
ERGIC3	-5.34	0.006532
ESRP2	-5.42	0.0065
ESRRA	-7.90	0.00214
ETFB	-5.98	0.00306
ETHE1	-4.50	0.008824
EVPL	-7.52	0.001208
EXOSC4	-6.22	0.001817
F12	-4.70	0.008438
F3	-15.60	5.17E-05
FAHD2A	-4.79	0.005032
FAIM	-4.73	0.009105
FAM100A	-13.43	0.001062
FAM100B	-5.41	0.006394
FAM103A1	-4.97	0.004332
FAM108A1	-5.50	0.005662
FAM120AOS	-5.57	0.009181
FAM122B	-5.43	0.006278

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
FAM129B	-5.67	0.00428
FAM131A	-4.47	0.00911
FAM156B	-8.73	0.00096
FAM157A	-9.32	0.00504
FAM166B	-15.17	0.00315
FAM173A	-12.69	0.00109
FAM179A	-7.12	0.00032
FAM189B	-5.09	0.00779
FAM195A	-4.93	0.00674
FAM201A	-6.80	0.00502
FAM203A	-5.88	0.00905
FAM206A	-8.02	0.00349
FAM20C	-9.83	0.00514
FAM212A	-11.97	0.00035
FAM213B	-5.71	0.00397
FAM21D	-32.31	8.6E-06
FAM222A	-4.85	0.00398
FAM46B	-4.13	0.00904
FAM60A	-5.14	0.00807
FAM65A	-5.23	0.00823
FAM73B	-5.55	0.00662
FAM82A2	-5.88	0.00249
FAM83D	-6.46	0.00266
FAM83G	-6.59	0.00789

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
FAM83H	-4.64	0.009218
FAM86HP	-13.24	0.009607
FAM8A1	-7.00	0.006252
FAM91A1	-6.93	0.007892
FAM96B	-5.49	0.009691
FARSA	-4.49	0.009604
FASTK	-5.82	0.004048
FASTKD5	-5.27	0.00636
FBL	-5.63	0.005205
FBRSL1	-5.30	0.003397
FBXL18	-5.18	0.006692
FBXL19	-7.58	0.001684
FBXO17	-7.14	0.001822
FBXO2	-6.81	0.00354
FBXO46	-5.30	0.006763
FBXW11	-5.65	0.006778
FBXW5	-7.26	0.002006
FBXW9	-7.12	0.009369
FECH	-6.89	0.00234
FEM1B	-5.75	0.008494
FER1L4	-9.11	0.001288
FER1L5	-4.79	0.007514
FEZ2	-4.91	0.00659
FEZF1	-15.20	0.00127

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
FGD1	-5.26	0.00768
FGF8	-13.75	0.00044
FGFR1	-6.44	0.00297
FGFR3	-5.91	0.00373
FGFR4	-7.59	0.00126
FGFRL1	-5.01	0.00711
FHOD1	-4.94	0.00581
FIBCD1	-4.37	0.00736
FIBP	-5.63	0.0047
FIZ1	-4.56	0.00791
FJX1	-8.05	0.00152
FKBP8	-5.65	0.00559
FKBPL	-4.53	0.00776
FKRP	-5.19	0.00714
FLNA	-8.48	0.00221
FLNB	-6.30	0.00282
FLNC	-6.48	0.00259
FLOT1	-5.08	0.00976
FLT3LG	-8.46	0.0038
FNDC3B	-5.00	0.00586
FNDC8	-6.43	0.00412
FOSL1	-5.49	0.00361
FOSL2	-7.73	0.0012
FOXA3	-6.37	0.00462

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
FOXD2	-6.43	0.008906
FOXD4	-5.91	0.006217
FOXE3	-10.40	0.008938
FOXK1	-4.98	0.005553
FOXN3	-5.25	0.009946
FOXN4	-10.13	0.001885
FOXP4	-5.98	0.002976
FOXRED2	-4.12	0.006949
FSCN1	-9.05	0.00133
FSD1	-7.29	0.004065
FSTL3	-8.97	0.000743
FURIN	-6.93	0.003136
FUZ	-7.89	0.009877
FXR2	-5.47	0.008218
FZD7	-4.37	0.009571
FZD9	-14.02	0.003347
FZR1	-7.38	0.002453
GABBR1	-7.08	0.004437
GABRE	-4.68	0.008377
GABRQ	-7.70	0.001661
GADD45B	-6.98	0.001594
GADD45GIP1	-6.45	0.003328
GAK	-4.87	0.008294
GAL3ST3	-8.42	0.009491

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
GALNT14	-4.63	0.007
GALNT2	-5.35	0.00857
GAN	-6.75	0.00557
GAS2L1	-9.36	0.00083
GAS8	-5.41	0.00625
GATAD2A	-4.79	0.00947
GDA	-6.64	0.00475
GDE1	-4.57	0.00556
GDPGP1	-4.24	0.00936
GET4	-8.34	0.00167
GFER	-6.63	0.00331
GFPT2	-5.66	0.00767
GGA1	-4.74	0.00956
GGCT	-9.08	0.00059
GGN	-14.27	0.00109
GGT7	-4.79	0.00995
GINS2	-4.78	0.00638
GIPC1	-5.63	0.00731
GIT1	-4.98	0.0093
GLB1L2	-5.37	0.00421
GLCE	-5.92	0.00671
GLDC	-6.10	0.00249
GLI1	-7.55	0.00234
GLI4	-7.90	0.00137

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
GLIS2	-9.23	0.009542
GLT25D1	-4.52	0.008828
GLT8D2	-5.05	0.009113
GLTSCR2	-5.00	0.009484
GLUD1	-5.78	0.004683
GMPPB	-6.14	0.006143
GNB1	-6.64	0.002753
GNB1L	-6.58	0.008515
GNB3	-5.63	0.005857
GNGT1	-12.30	0.000198
GOLGA1	-5.92	0.003182
GOLM1	-6.35	0.00294
GOLPH3	-6.28	0.004741
GORASP1	-5.59	0.007073
GPC1	-6.08	0.003393
GPN2	-6.46	0.004104
GPR35	-13.10	0.007473
GPRC5C	-6.56	0.001375
GPRIN2	-9.93	0.005184
GPS1	-5.30	0.005987
GPSM1	-7.73	0.002964
GRASP	-8.25	0.001191
GRIN1	-5.90	0.004398
GRIN2D	-5.66	0.003577

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
G RTP1	-5.73	0.00907
GSDMD	-5.00	0.00533
GSS	-4.92	0.00705
GTPBP3	-5.32	0.00814
GUCY1B2	-7.71	0.00815
GUSBP11	-5.14	0.00525
GUSBP4_1	-7.44	0.00838
H2AFX	-4.92	0.00331
HAGHL	-10.52	0.00345
HAPLN3	-11.35	0.00736
HBA1	-4.92	0.00422
HCFC1	-5.74	0.00797
HCFC1R1	-6.36	0.00304
HDAC7	-5.88	0.00492
HES4	-5.29	0.0068
HEXDC	-4.60	0.00861
HEXIM2	-6.11	0.00575
HFE	-5.78	0.00425
HGS	-5.26	0.00666
HHEX	-8.43	0.0017
HIGD2A	-6.61	0.00756
HIRIP3	-5.17	0.00322
HIST1H2BD	-4.15	0.00275
HIST1H2BL	-6.27	0.00273

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
HIST1H2BO	-4.49	0.004299
HIST2H3A	-11.75	0.000496
HIST2H3D	-7.95	0.00195
HIST2H3PS2	-5.88	0.0061
HIVEP3	-4.65	0.006299
HKDC1	-12.91	0.00059
HLA-F	-5.20	0.007987
HMG20B	-8.68	0.001827
HMGA1	-5.95	0.004437
HMGA1P4	-14.14	0.000272
HMHA1	-6.82	0.003685
HMOX1	-5.72	0.008211
HNRNPUL1	-4.94	0.007313
HOMER3	-6.43	0.002958
HOXA1	-4.45	0.008027
HOXA5	-18.59	6.71E-05
HOXC9	-5.33	0.006547
HOXC-AS2	-7.23	0.004293
HPCAL1	-7.46	0.002987
HPDL	-8.43	0.002664
HR	-6.74	0.002087
HRAS	-4.79	0.003102
HS1BP3	-4.62	0.005769
HS3ST1	-4.28	0.007183

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
hsa-mir-4763	-5.77	0.00476
HSBP1L1	-6.18	0.00409
HSD11B2	-6.23	0.00657
HSD17B1	-5.60	0.00393
HSD17B8	-6.73	0.00572
HSPA12B	-5.95	0.00497
HSPB1	-5.84	0.00557
HSPBP1	-7.72	0.00077
HSPG2	-5.31	0.00979
HYAL3	-7.32	0.00528
ICAM1	-5.91	0.00305
ICAM5	-7.34	0.00307
ICK	-4.74	0.00377
ID1	-7.01	0.00127
ID2	-7.97	0.00101
IDH3B	-5.65	0.00445
IER2	-6.72	0.00542
IER3	-4.42	0.00456
IER5L	-14.25	0.00389
IFFO2	-8.60	0.00105
IFNGR2	-5.37	0.00846
IFT43	-4.56	0.00751
IGSF9	-6.74	0.00572
IL11RA	-7.41	0.00549

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
IL17RA	-4.42	0.008857
IL18BP	-5.43	0.009894
IL1RAP	-6.15	0.004334
IL27RA	-6.88	0.003853
ILF2	-4.74	0.008616
IMPAD1	-5.55	0.008246
INCENP	-4.98	0.009215
INF2	-5.39	0.006843
INPP5E	-5.67	0.009059
INPPL1	-5.25	0.008531
INSL3	-12.16	0.005884
INTS1	-6.65	0.00295
IRAK1	-5.88	0.004236
IRF2BP1	-5.68	0.002552
IRF2BPL	-6.80	0.007146
IRF3	-8.01	0.003125
IRF5	-4.88	0.00828
IRS1	-6.65	0.001974
IRX4	-9.13	0.000435
ITGA2B	-12.80	6.76E-05
ITGA3	-6.22	0.003209
ITGA5	-5.86	0.006783
ITGB4	-6.02	0.008539
ITGB7	-5.08	0.004759

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
ITPKA	-10.14	0.00093
ITPR3	-5.69	0.00603
JAG2	-7.47	0.00192
JAGN1	-5.98	0.00317
JPH3	-8.08	0.00998
JUN	-4.93	0.00683
JUNB	-5.94	0.00876
KCNAB2	-6.80	0.00488
KCNB1	-32.62	0.00733
KCNC1	-8.39	0.00316
KCNC3	-6.46	0.00483
KCNG3	-5.11	0.0009
KCNH3	-4.77	0.00876
KCNK5	-6.62	0.00336
KCNN1	-6.90	0.00166
KCNN4	-6.51	0.00255
KCNQ4	-5.48	0.0051
KCP	-17.89	0.00497
KCTD11	-7.33	0.00748
KCTD13	-4.75	0.00818
KCTD15	-5.20	0.00375
KCTD17	-8.49	0.00298
KCTD5	-5.35	0.00627
KEAP1	-5.16	0.00692

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
KIAA0040	-6.09	0.006493
KIAA0284	-8.40	0.000784
KIAA0930	-4.94	0.008299
KIAA1274	-5.37	0.00865
KIAA1522	-6.19	0.003831
KIAA1609	-4.54	0.007018
KIAA1737	-5.65	0.009061
KIF18B	-6.38	0.007005
KIF26A	-8.30	0.001301
KIF9	-5.75	0.004967
KIFC2	-4.11	0.006987
KIFC3	-9.43	0.002033
KIRREL	-7.34	0.001749
KLC2	-5.67	0.004908
KLF16	-7.49	0.005159
KLF4	-5.62	0.002416
KLHDC4	-4.72	0.006095
KLHL17	-9.36	0.001622
KLHL21	-6.66	0.001752
KLHL26	-4.15	0.009673
KLHL8	-6.46	0.004246
KLK8	-5.64	0.005154
KPNA2	-6.07	0.004567
KRI1	-5.87	0.002532

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
KRT13	-7.61	0.00989
KRT15	-6.13	0.00611
KRT18	-5.36	0.00696
KRT5	-5.74	0.00994
KRT7	-14.05	0.00028
KRT80	-16.64	0.00023
KRTAP4-7	-7.26	0.00139
L3MBTL2	-5.04	0.00867
LA16c-306E5.3	-7.77	0.00759
LAGE3	-4.75	0.00361
LAMA5	-8.69	0.00057
LAMB3	-6.12	0.00408
LAMC2	-5.55	0.0053
LAMC3	-6.45	0.0032
LASP1	-4.88	0.00716
LAT2	-5.42	0.00819
LDHD	-9.99	0.00071
LDOC1L	-4.76	0.00917
LEMD2	-4.46	0.00997
LENG1	-10.59	6.9E-05
LENG8	-6.15	0.00569
LEPREL1	-8.76	0.00066
LEPREL2	-7.89	0.00189
LEPREL4	-4.94	0.00283

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
LFNG	-6.35	0.005246
LGALS1	-4.12	0.008536
LGI3	-8.75	0.002472
LHB	-7.72	0.001097
LIMD1	-4.88	0.005694
LIMS2	-6.83	0.007749
LINC00471	-6.36	0.008676
LINC00482	-5.62	0.009288
LINC00493	-4.71	0.006568
LINGO1	-4.78	0.007062
LMF2	-6.29	0.003205
LMTK3	-7.31	0.008663
LNX1	-9.27	0.00541
LONP1	-5.78	0.004253
LOXL2	-6.83	0.004269
LOXL3	-11.16	0.000118
LRFN1	-6.59	0.006114
LRP3	-6.09	0.004516
LRP4	-6.22	0.003575
LRP5	-6.90	0.006784
LRP8	-6.34	0.003009
LRRC14	-6.48	0.002266
LRRC16B	-5.22	0.006956
LRRC24	-9.07	0.008552

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
LRRC45	-5.75	0.00541
LRRC56	-8.55	0.00319
LRRC57	-6.14	0.00305
LRRC58	-10.62	0.00258
LRRN2	-8.80	0.00184
LRTOMT	-7.58	0.0091
LRWD1	-6.94	0.00199
LSM10	-5.44	0.00627
LSM2	-5.80	0.00805
LSR	-5.07	0.00866
LTBP2	-11.13	0.00307
LTBP3	-9.41	0.00049
LTBP4	-4.85	0.00952
LTBR	-7.54	0.0019
LY6E	-5.22	0.00931
LYPD3	-10.73	0.00091
LZTFL1	-5.08	0.00807
LZTR1	-5.90	0.00455
LZTS2	-4.22	0.00873
MAD1L1	-4.59	0.0054
MAEA	-5.08	0.00537
MAFF	-5.42	0.00328
MAFG-AS1	-6.48	0.00162
MAFIPL	-6.44	0.00146

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
MAGOH	-6.55	0.001823
MAMDC4	-4.65	0.009295
MAN2C1	-4.87	0.008907
MANEAL	-6.53	0.00402
MANF	-5.49	0.004796
MAP1A	-5.18	0.007679
MAP1S	-5.70	0.008392
MAP2K2	-5.26	0.008059
MAP2K7	-5.07	0.009411
MAP3K10	-7.15	0.000938
MAP3K11	-6.56	0.00188
MAP3K14	-7.30	0.002216
MAP3K15	-4.57	0.00992
MAP4K2	-5.08	0.008807
MAPK12	-7.06	0.002233
MAPK15	-9.66	0.001612
MAPK8IP3	-6.05	0.004911
MARCH4	-15.37	0.000635
MARCKSL1	-5.19	0.005528
MARK4	-5.74	0.005869
MATN2	-7.66	0.003456
MBD3	-10.06	0.000342
MCAM	-4.92	0.004833
MCM5	-5.98	0.007958

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
MCOLN1	-5.62	0.00446
MDGA1	-7.83	0.0013
MDP1	-5.96	0.00664
MEA1	-5.05	0.00953
MED11	-6.27	0.00111
MED16	-6.99	0.00572
MED22	-5.01	0.00995
MED25	-5.47	0.00454
MED27	-5.66	0.00368
MED29	-4.80	0.00893
MED7	-8.28	0.00441
MEGF6	-8.40	0.00079
MEGF8	-6.14	0.00402
MEIS3	-6.16	0.00702
MEPCE	-5.33	0.00769
MESDC1	-7.39	0.00163
METRNL	-7.19	0.00261
METRNL	-5.98	0.00494
METTLL1	-5.47	0.00569
METTLL7B	-6.02	0.00215
MEX3A	-6.05	0.00672
MFGE8	-6.19	0.00873
MFI2	-8.26	0.00171
MFSD10	-5.89	0.00488

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
MFSD12	-5.74	0.003212
MFSD5	-5.02	0.008024
MFSD7	-6.66	0.003454
MGAT5	-5.18	0.006395
MIB2	-5.76	0.00649
MICAL1	-4.45	0.008476
MICALL1	-4.99	0.007308
MICALL2	-5.85	0.006976
MID1	-6.42	0.002382
MID1IP1	-7.48	0.001011
MIDN	-4.82	0.006686
MIEN1	-5.26	0.008103
MIER2	-5.49	0.007076
MIS18A	-4.73	0.007099
MKL1	-4.90	0.006782
MLLT1	-4.95	0.009509
MLST8	-6.12	0.004889
MMAB	-5.04	0.009968
MMP15	-4.76	0.009363
MMP17	-17.17	0.004988
MMP19	-6.71	0.005814
MMP23B	-53.78	0.001442
MMRN2	-5.80	0.00303
MOB2	-4.93	0.008972

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
MORN1	-4.68	0.00778
MPG	-8.07	0.00736
MPRIP	-6.18	0.00576
MPST	-5.36	0.00453
MPV17L2	-5.57	0.0035
MRAP	-33.72	0.00013
MRC2	-5.72	0.00633
MRM1	-6.98	0.00405
MRPL18	-6.00	0.00554
MRPL23	-4.27	0.00694
MRPL28	-5.66	0.00686
MRPL32	-4.49	0.00597
MRPL37	-5.36	0.00475
MRPL38	-4.97	0.00387
MRPL4	-6.87	0.00349
MRPL41	-6.40	0.00339
MRPL46_1	-4.52	0.00791
MRPS11	-5.23	0.00741
MRPS18A	-7.36	0.00339
MRPS26	-5.70	0.0048
MRPS34	-7.43	0.00244
MRVI1	-5.92	0.00266
MS4A15	-13.48	0.00301
MSANTD3	-6.80	0.00158

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
MSLN	-6.25	0.001294
MSLNL	-15.21	0.008853
MSN	-6.59	0.00279
MSX1	-7.07	0.00181
MT2A	-5.26	0.001871
MTSS1	-5.37	0.00856
MTSS1L	-5.91	0.003711
MUC3A	-6.85	0.000146
MUTYH	-6.25	0.006202
MYBL2	-4.68	0.009266
MYCBP	-7.71	0.002292
MYEOV	-10.19	0.00106
MYH14	-5.80	0.006695
MYH3	-7.40	0.002148
MYH9	-6.91	0.003177
MYO15B_1	-6.07	0.006663
MYO1C	-5.67	0.00667
MYO7A	-6.90	0.007144
MYPN	-8.67	0.009825
MYT1	-7.10	0.000858
MZF1	-5.99	0.005318
MZT2A	-6.88	0.00391
MZT2B	-10.69	0.000807
NAALADL1	-16.12	0.006549

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
NAB2	-5.89	0.00489
NACC1	-4.91	0.00763
NAGPA	-4.01	0.00766
NAPRT1	-5.45	0.00694
NAT14	-5.33	0.00817
NAT8L	-6.18	0.00439
NBEAL2	-5.72	0.00887
NCAN	-9.08	0.00745
NCAPH2	-4.64	0.00787
NCDN	-4.92	0.00614
NCEH1	-5.34	0.00687
NCLN	-5.24	0.0067
NCOR2	-5.99	0.00435
NDOR1	-7.08	0.00211
NDRG2	-5.20	0.00575
NDST1	-4.85	0.00921
NDUFA13	-5.33	0.00661
NDUFA6	-7.11	0.00405
NDUFA7	-4.62	0.0024
NDUFB7	-8.04	0.00139
NDUFS7	-4.49	0.00843
NDUFV1	-5.56	0.00887
NEK7	-8.05	0.00564
NELL2	-13.10	0.00747

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
NES	-7.94	0.001873
NFATC4	-6.51	0.007195
NFIC	-7.14	0.007018
NFKBIB	-6.64	0.00304
NFKBID	-7.00	0.000617
NHP2L1	-5.42	0.004829
NIPSNAP1	-4.90	0.008276
NIT1	-5.45	0.004752
NKD2	-5.37	0.008436
NKPD1	-4.81	0.008276
NKX2-8	-4.58	0.007816
NKX6-1	-4.12	0.005196
NLGN2	-7.65	0.002003
NLGN3	-10.83	0.003695
NMB	-7.77	0.004765
NME1	-6.59	0.000369
NME2	-4.74	0.009849
NOC2L	-5.17	0.00841
NOC4L	-6.97	0.004483
NOL3	-8.44	0.001504
NOS3	-6.79	0.005896
NOSIP	-8.73	0.003928
NOTCH3	-5.79	0.004325
NOTUM	-12.22	0.006408

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
NPDC1	-5.34	0.00643
NPIPL3	-7.86	0.00249
NPPA-AS1	-7.30	0.00272
NPR2	-5.71	0.00709
NPTN	-7.37	0.00198
NPTXR	-7.34	0.00373
NPW	-10.08	0.00016
NR1D1	-7.70	0.0037
NR2C2AP	-4.41	0.00564
NR2E1	-10.40	0.00894
NR2F2	-5.08	0.00567
NR2F6	-5.33	0.00581
NR4A1	-6.12	0.00512
NRAP	-10.74	0.0094
NRAS	-6.19	0.00367
NRBF2	-5.13	0.00596
NRGN	-7.74	0.0034
NRN1L	-28.91	9.9E-05
NSUN5	-4.93	0.00832
NT5C	-7.96	0.0021
NTHL1	-5.24	0.00406
NTN1	-6.18	0.00409
NTN3	-13.85	0.00152
NUAK2	-5.99	0.00296

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
NUDT18	-7.27	0.002476
NUDT22	-4.43	0.005538
NUDT9	-4.96	0.007427
NUMBL	-6.49	0.002164
NUP54	-4.83	0.00906
NWD1	-13.05	0.003662
NYAP1	-6.23	0.006522
OBFC1	-4.92	0.008697
OBSCN	-6.09	0.000732
ODF3B	-6.79	0.00308
OPLAH	-6.11	0.005311
ORA1	-4.49	0.003516
ORA2	-4.23	0.008085
ORAOV1	-4.98	0.004598
ORMDL2	-6.08	0.005729
OSBPL5	-6.87	0.00202
OSGIN1	-13.94	0.001674
OSTC	-4.24	0.006201
OSTM1	-5.11	0.008404
OTUD5	-5.76	0.004854
OVOL1	-4.62	0.009596
P2RX2	-8.29	0.006909
P2RY11	-6.61	0.002516
PAF1	-6.61	0.00326

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
PAFAH1B2	-7.04	0.00305
PALM3	-11.36	0.00606
PAM16	-4.13	0.00955
PAPLN	-4.29	0.00891
PARP3	-6.55	0.00292
PASK	-5.43	0.00606
PCDH7	-6.31	0.00242
PCED1A	-7.46	0.00715
PCGF2	-6.59	0.0031
PCIF1	-4.75	0.00673
PCOLCE2	-5.78	0.00514
PDE3A	-5.45	0.00347
PDGFB	-7.64	0.00402
PDHX	-5.15	0.00613
PDLIM2	-7.03	0.00562
PDLIM5	-4.74	0.00933
PDLIM7	-6.59	0.00356
PDZK1P1	-8.07	0.00647
PEAR1	-5.17	0.00949
PEG10	-6.56	0.00338
PELO	-8.07	0.00054
PEMT	-6.54	0.00601
PEX10	-4.27	0.00865
PEX11A	-5.36	0.00756

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
PFAS	-4.70	0.007652
PFDN6	-5.50	0.002081
PFKFB3	-6.28	0.004231
PFKP	-6.68	0.002749
PFN1	-4.40	0.006657
PGAP3	-8.15	0.005289
PGRMC1	-5.66	0.004428
PHLDB1	-5.13	0.009727
PHRF1	-6.28	0.003367
PIDD	-5.67	0.007199
PIGQ	-5.00	0.003967
PIH1D2	-5.41	0.007589
PIK3CD	-5.16	0.004429
PILRA	-12.60	0.001046
PIM3	-5.94	0.004473
PIN1	-7.97	0.001576
PIP4K2C	-4.91	0.007774
PIP5KL1	-4.69	0.00518
PITPNM1	-6.21	0.005358
PITPNM2	-6.60	0.005226
PITX1	-6.75	0.001772
PKD1	-6.28	0.003075
PKD1L2	-4.31	0.009369
PKM	-5.95	0.004042

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
PKMYT1	-7.33	0.00252
PKN1	-5.41	0.00484
PKN3	-7.89	0.00319
PKP3	-5.21	0.00949
PLA2G10	-23.11	0.00719
PLAC1	-28.56	0.00951
PLAT	-5.12	0.00601
PLAU	-5.62	0.0091
PLAUR	-6.18	0.00747
PLCB3	-5.74	0.00789
PLEC	-7.14	0.00181
PLEKHB1	-5.98	0.00282
PLEKHD1	-6.99	0.00926
PLEKHF1	-5.26	0.00885
PLEKHG2	-5.89	0.00688
PLEKHG3	-5.19	0.00734
PLEKHG4	-7.37	0.00199
PLEKHG5	-5.65	0.00698
PLEKHH3	-6.42	0.00343
PLEKHN1	-7.94	0.00165
PLIN2	-4.47	0.00832
PLOD1	-6.32	0.0052
PLOD3	-5.60	0.00479
PLSCR3	-6.99	0.00271

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
PLXNA1	-6.31	0.005076
PLXNB1	-4.98	0.007647
PMFBP1	-7.21	0.005087
PMS2P4	-6.64	0.005695
PMVK	-5.01	0.007402
PNKP	-8.35	0.001987
PNPLA2	-5.75	0.00711
PNPLA5	-5.73	0.004155
PNPLA6	-6.06	0.003367
POFUT2	-5.59	0.008332
POGK	-5.98	0.004238
POLD1	-8.74	0.001952
POLR1B	-4.74	0.007442
POLR2E	-5.09	0.009166
POLR2J	-4.98	0.009475
POLR3K	-4.34	0.008841
POU3F1	-6.37	0.001592
PPIEL	-8.32	0.003348
PPL	-8.12	0.003132
PPP1CA	-5.94	0.003798
PPP1R12C	-5.99	0.004037
PPP1R13B	-5.84	0.005043
PPP1R13L	-8.32	0.003434
PPP1R16A	-5.06	0.007426

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
PPP1R26	-4.72	0.00907
PPP1R37	-5.28	0.0089
PPP1R9B	-5.11	0.00822
PPP2R2C	-5.06	0.00771
PPP2R2D	-4.87	0.00471
PPP5C	-5.24	0.00593
PPP6R2	-5.29	0.00681
PQLC1	-4.60	0.00756
PQLC2	-6.17	0.00133
PRAGMIN	-6.91	0.00254
PRCC	-5.16	0.00647
PRDX2	-4.23	0.00778
PRDX5	-4.87	0.00798
PRF1	-9.55	0.00036
PRIMA1	-5.55	0.003
PRKCDBP	-9.35	0.00546
PRKRIR	-6.25	0.00542
PROCA1	-6.90	0.00886
PRPF38A	-5.12	0.00916
PRR12	-7.40	0.00307
PRR22	-8.00	0.00269
PRR7	-5.91	0.00432
PRRT2	-8.98	0.00412
PRRT3	-6.98	0.00129

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
PRRT4	-5.13	0.009738
PRSS22	-8.88	0.003722
PRSS3	-4.70	0.006999
PRSS30P	-7.87	0.000758
PRSS8	-6.64	0.008895
PRX	-6.88	0.006974
PSD	-5.46	0.006486
PSMA7	-4.90	0.005834
PSMB10	-6.34	0.002475
PSMB3	-4.40	0.009314
PSMC3IP	-4.40	0.008616
PSMC5	-4.95	0.008308
PSMD8	-5.41	0.005272
PSMG3	-4.48	0.008247
PSORS1C1	-6.85	0.005009
PTCHD2	-5.45	0.003246
PTDSS2	-5.39	0.00369
PTGES2	-5.60	0.007541
PTK7	-7.90	0.00181
PTOV1	-5.19	0.009617
PTP4A3	-6.07	0.00061
PTPN1	-5.21	0.00731
PTPN14	-6.24	0.002505
PTPRF	-6.00	0.002674

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
PTPRS	-6.03	0.00368
PTRH1	-11.33	0.00229
PUF60	-6.02	0.00432
PUS1	-6.15	0.00266
PVR	-4.08	0.00926
PVRL2	-6.87	0.00392
PWP2	-4.64	0.00977
PXDC1	-5.54	0.0089
PXN	-5.51	0.00718
PYCR1	-6.37	0.00538
PYCRL	-5.94	0.00416
PYGM	-12.00	0.00181
PYGO1	-8.23	0.00455
QSOX2	-5.14	0.00825
QTRT1	-6.40	0.00744
RAB11B	-7.50	0.00159
RAB11FIP3	-6.52	0.00226
RAB12	-11.46	0.00033
RAB18	-5.59	0.00798
RAB27B	-11.09	0.00553
RAB36	-5.28	0.00505
RAB31L1	-5.87	0.00912
RABL2A	-6.44	0.00267
RAC2	-5.13	0.00791

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
RACGAP1	-5.94	0.004039
RADIL	-10.29	0.000447
RAMP1	-8.65	0.00156
RANGAP1	-5.94	0.004457
RAP1GAP	-6.22	0.007193
RAPGEFL1	-5.61	0.00799
RAPSN	-11.67	0.009176
RARA	-6.06	0.008247
RASA4	-15.87	0.009519
RASGRP2	-4.93	0.007257
RASSF7	-6.32	0.003049
RBM10	-6.81	0.003155
RBM14	-5.13	0.007557
RBM38	-5.67	0.002677
RBM42	-5.11	0.007533
RBM8A	-4.96	0.008895
RCBTB2	-6.31	0.007117
RCC1	-5.13	0.007525
RCOR2	-10.17	0.000354
RECQL4	-6.38	0.003635
RELB	-8.02	0.003197
REPIN1	-7.56	0.005718
RFNG	-5.01	0.00916
RFX1	-6.17	0.002065

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
RGS19	-5.91	0.00461
RGS9	-8.54	0.00424
RHBDD3	-5.27	0.00593
RHOT2	-6.67	0.00881
RHPN1	-6.72	0.00378
RHPN2	-5.01	0.00375
RILPL1	-5.15	0.00417
RIN1	-7.67	0.00208
RMND5A	-6.80	0.00533
RNASEH2C	-6.21	0.00505
RNASET2	-7.94	0.003
RNF167	-4.92	0.0098
RNF207	-5.29	0.00497
RNF208	-6.15	0.00631
RNF223	-10.27	0.00166
RNF31	-5.67	0.00418
RNF39	-5.18	0.00653
RNPEPL1	-5.20	0.00902
RNPS1	-7.00	0.00269
ROR1	-6.65	0.00277
RP11-1008C21.2	-8.42	0.00949
RP11-103J17.2	-8.33	0.00475
RP11-1079K10.4	-5.49	0.00878
RP11-10A14.5	-12.00	0.00377

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
RP11-112L6.4	-12.44	0.004645
RP11-1166P10.1	-6.38	0.003052
RP11-1277A3.2	-4.85	0.007947
RP11-1334A24.4	-8.33	0.009422
RP11-136O12.2	-15.65	0.000995
RP11-18H21.1	-4.74	0.002247
RP11-195F19.9	-6.90	0.002939
RP11-213H15.3	-7.43	0.002348
RP11-222A11.1	-20.39	0.003632
RP11-247A12.2	-5.64	0.00173
RP11-273B20.1	-12.70	0.000854
RP11-27I1.4	-5.39	0.006577
RP11-27M24.1	-4.92	0.004215
RP11-284F21.7	-8.20	0.004716
RP11-323F5.2	-12.63	0.002479
RP11-328N19.1	-9.53	0.002927
RP11-345J4.5	-12.20	0.000615
RP11-345L23.1	-14.34	0.003202
RP11-357C3.3	-10.13	0.001143
RP11-365P13.3	-9.12	0.002947
RP11-378J18.3	-6.79	0.00475
RP11-380O24.1	-7.23	0.004293
RP11-385D13.1	-11.81	0.000284
RP11-40F6.2	-7.03	0.002458

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
RP11-426A6.7	-8.58	0.00093
RP11-431J24.2	-5.05	0.00887
RP11-446E24.4	-6.69	0.00685
RP11-46C24.8	-7.73	0.00214
RP11-46D6.1	-12.44	0.00042
RP11-475N22.4	-6.37	0.00493
RP11-481A20.11	-6.56	0.00428
RP11-492E3.1	-5.44	0.00509
RP11-49I11.1	-15.65	0.001
RP11-508N12.2	-17.43	0.00949
RP11-516C1.1	-5.48	0.00774
RP11-522N14.1	-14.24	0.00347
RP11-528L24.3	-4.85	0.00673
RP11-540A21.2	-4.38	0.00781
RP11-571M6.6	-6.33	0.00328
RP11-578F21.3	-12.74	0.00043
RP11-583F2.3	-12.30	0.00202
RP11-649A18.12	-9.31	0.00892
RP11-661A12.9	-6.21	0.00685
RP11-671J11.4	-5.74	0.00392
RP11-67L3.4	-6.35	0.00433
RP11-685I11.1	-9.86	0.00142
RP11-69E11.4	-5.17	0.00114
RP11-77I22.3	-7.97	0.00325

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
RP11-77K12.8	-7.13	0.001393
RP11-77P6.2	-8.43	0.004209
RP11-78C3.1	-9.20	0.001007
RP11-79P5.2	-4.43	0.007774
RP11-847H18.2	-5.09	0.004051
RP11-86H7.1	-4.48	0.00962
RP11-874J12.2	-31.30	0.00049
RP11-887P2.1	-7.27	0.001665
RP11-958N24.1	-9.86	0.000544
RP11-968A15.8	-8.33	0.004745
RP11-96C23.8	-10.35	0.001244
RP1-30G7.2	-6.13	0.001959
RP13-608F4.4	-4.37	0.009744
RP1-40E16.8	-13.40	0.001135
RP1-46F2.2	-13.57	0.000639
RP3-399L15.3	-7.58	0.004228
RP3-402G11.5	-5.69	0.002182
RP3-410C9.1	-8.38	0.00615
RP3-412A9.11	-4.73	0.004037
RP3-439F8.1	-36.48	0.00632
RP4-594I10.2	-18.84	0.008269
RP4-697K14.7	-5.50	0.007057
RP4-758J18.10	-16.60	0.000204
RP4-785G19.5	-9.96	0.004738

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
RP5-1065J22.4	-5.22	0.00916
RP5-1157M23.2	-5.55	0.00333
RP5-940J5.3	-11.30	0.0092
RP5-991G20.1	-7.14	0.00665
RPAP1	-4.62	0.00865
RPGRIP1L	-4.74	0.00952
RPL18	-5.53	0.00833
RPL18A	-7.82	0.00475
RPL29	-4.42	0.00551
RPP21	-6.57	0.0054
RPS10	-4.42	0.00839
RPS12	-4.23	0.00367
RPS15	-4.95	0.00501
RPS17L	-5.07	0.00036
RPS19BP1	-4.67	0.00983
RPS6	-4.57	0.0099
RPS6KL1	-6.32	0.0028
RPS7	-4.35	0.0086
RPS9	-6.93	0.00374
RPTOR	-5.23	0.00923
RPUSD1	-5.79	0.00523
RPUSD2	-5.76	0.00377
RRP7A	-5.33	0.00734
RRP7B	-4.82	0.0053

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
RSAD1	-4.68	0.009165
RTCA	-7.65	0.001408
RTEL1_1	-5.92	0.005488
RTKN	-5.48	0.004355
RTN2	-4.32	0.009208
RTN4RL1	-5.69	0.008953
RTN4RL2	-7.56	0.005184
RUNDC3A	-4.42	0.002838
RUSC1	-5.57	0.007704
S100A14	-8.19	0.001192
S100A16	-5.55	0.005918
S100A3	-14.51	0.00963
S1PR5	-4.05	0.008882
SAFB	-6.77	0.00281
SAMD10	-5.75	0.00931
SAMD14	-6.69	0.009916
SAMD4B	-8.12	0.001031
SAPCD2	-7.22	0.002949
SARDH	-4.91	0.008938
SART1	-5.34	0.006141
SART3	-4.92	0.009568
SBF1	-6.20	0.005798
SCAMP4	-4.67	0.002608
SCAND1	-4.80	0.002775

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
SCARA3	-9.40	0.00096
SCARB1	-4.74	0.00938
SCN5A	-5.14	0.00699
SCNM1	-4.31	0.00988
SCNN1A	-8.06	0.00174
SCRIB	-5.78	0.00604
SCRN2	-5.97	0.00519
SCTR	-8.42	0.00949
SCYL1	-5.29	0.0064
SDC3	-5.17	0.00782
SDF2	-4.28	0.0075
SDHA	-5.32	0.00361
SDHAP3	-4.10	0.00792
SDHB	-5.92	0.00153
SDR16C5	-15.27	0.0025
SDR39U1	-4.98	0.00132
SEC13	-6.18	0.00274
SECTM1	-8.91	0.00863
SEMA3F	-7.18	0.00239
SEMA6B	-6.21	0.00555
SEMA6C	-4.57	0.00523
SEMA7A	-12.63	0.0003
SEPT4	-9.09	0.00762
SEPT9	-5.47	0.00737

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
SERINC2	-6.13	0.009098
SERPINE1	-8.92	0.000848
SERPINH1	-9.42	0.001008
SETDB1	-5.14	0.008646
SF3A2	-7.08	0.004391
SF3B4	-6.72	0.002189
SFN	-5.20	0.005888
SGSM1	-5.25	0.004304
SGSM2	-5.49	0.007299
SGTA	-6.50	0.002772
SH2B1	-5.29	0.009619
SH2B2	-5.12	0.001793
SH2B3	-4.32	0.009734
SH2D5	-4.36	0.007812
SH3BGRL2	-5.04	0.008816
SH3BGRL3	-5.55	0.006309
SH3BP2	-5.03	0.005157
SH3GLB2	-4.97	0.00925
SH3RF2	-5.15	0.008913
SH3TC1	-7.04	0.002007
SHANK1	-5.59	0.007378
SHANK3	-5.32	0.005703
SHARPIN	-4.66	0.009855
SHB	-12.60	0.000526

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
SHC1	-8.16	0.00195
SHISA8	-16.71	0.0009
SHROOM1	-4.41	0.00743
SHROOM2	-5.81	0.00285
SHROOM3	-5.58	0.00511
SIGIRR	-6.45	0.00246
SIGLEC10	-5.17	0.00484
SKOR1	-9.74	0.00974
SLC10A3	-4.86	0.00608
SLC10A4	-8.18	0.00414
SLC12A7	-6.16	0.00385
SLC16A13	-5.68	0.00738
SLC16A3	-8.14	0.00232
SLC16A5	-7.01	0.00526
SLC16A8	-13.43	0.00013
SLC17A9	-6.31	0.00367
SLC19A1	-5.62	0.00566
SLC20A1	-5.23	0.00657
SLC22A18	-8.72	0.00086
SLC23A2	-6.35	0.00312
SLC25A10	-6.61	0.00217
SLC25A11	-5.77	0.00463
SLC25A22	-5.09	0.007
SLC25A35	-6.91	0.00151

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
SLC26A11	-4.27	0.006825
SLC29A1	-5.30	0.008431
SLC29A4	-6.12	0.002601
SLC2A3	-10.15	0.002095
SLC2A4RG	-4.68	0.008755
SLC37A1	-4.66	0.005972
SLC38A10	-5.23	0.007193
SLC38A3	-8.04	0.007066
SLC38A7	-5.66	0.006575
SLC39A13	-7.94	0.004309
SLC39A14	-5.44	0.005912
SLC40A1	-4.83	0.00804
SLC41A1	-6.62	0.002685
SLC43A2	-4.86	0.003308
SLC44A2	-6.00	0.005367
SLC44A3	-6.62	0.004796
SLC45A1	-5.44	0.005911
SLC45A3	-5.77	0.005517
SLC48A1	-4.83	0.009775
SLC4A11	-5.85	0.007193
SLC4A2	-6.00	0.004913
SLC4A3	-6.66	0.00432
SLC52A2	-4.54	0.008294
SLC5A5	-4.27	0.004539

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
SLC6A16	-12.28	0.00461
SLC6A17	-7.96	0.00119
SLC9A3R1	-5.91	0.0024
SLC9A3R2	-6.45	0.00903
SLCO4A1	-6.65	0.00367
SLX1B-SULT1A4	-5.31	0.00898
SMAD5	-5.78	0.0089
SMAD7	-16.91	0.00075
SMAGP	-6.54	0.00158
SMARCC1	-6.01	0.00554
SMG6	-5.90	0.00631
SMO	-6.94	0.00383
SMPD1	-7.30	0.00146
SMPD4	-5.49	0.00649
SNAI3	-10.84	0.00101
SNAP47	-7.15	0.00359
SNAPC2	-6.47	0.0068
SNAPC4	-6.50	0.00361
SNAPIN	-4.12	0.00964
SNED1	-5.91	0.0031
SNRPB	-6.54	0.00205
SNX8	-5.12	0.00852
SNX9	-5.45	0.00626
SOCS3	-4.62	0.00688

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
SOCS7	-5.26	0.009761
SOD1	-4.28	0.005857
SOGA1	-4.20	0.007322
SOGA2	-6.09	0.004815
SOLH	-6.77	0.001862
SORBS3	-6.33	0.002061
SPAG1	-8.30	0.00851
SPAG4	-4.10	0.007847
SPATA20	-5.57	0.003253
SPATA2L	-9.22	0.001239
SPECC1	-6.71	0.004125
SPEG	-8.02	0.000407
SPHK1	-4.99	0.00444
SPHK2	-7.96	0.002426
SPIN2B	-5.09	0.00987
SPINT2	-4.74	0.007348
SPNS2	-6.97	0.009955
SPOCD1	-6.97	0.003183
SPPL2B	-7.56	0.003137
SPR	-4.53	0.00848
SPSB4	-22.98	0.003976
SPTBN2	-6.17	0.005537
SPTBN5	-5.19	0.004
SRC	-5.57	0.007799

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
SREBF1	-5.23	0.00851
SRF	-4.07	0.00606
SRMS	-8.49	0.00178
SRPX2	-6.83	0.00892
SRRM3	-5.79	0.00643
SRRT	-6.05	0.00507
SSBP4	-5.78	0.00482
SSH3	-5.06	0.0089
SSTR5	-7.18	0.00135
ST13P12	-7.63	0.00377
ST14	-6.91	0.00411
ST3GAL2	-4.70	0.00666
ST3GAL4	-4.41	0.00794
ST3GAL6-AS1	-8.99	0.00706
STAB1	-12.33	0.00021
STAT6	-4.84	0.00959
STAU1	-5.10	0.00873
STIP1	-5.66	0.00334
STK11	-6.38	0.00278
STK25	-5.48	0.00549
STMN3	-6.66	0.00338
STOML1	-4.46	0.00731
STOML2	-4.84	0.00453
STON1-GTF2A1L	-15.54	0.00081

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
STRA13	-5.63	0.005523
STRN4	-5.89	0.004712
STX16	-5.54	0.009119
STXBP2	-5.57	0.009395
SUGP1	-6.11	0.002979
SULT1A2	-8.57	0.003575
SUMO3	-4.86	0.006017
SURF1	-6.50	0.004113
SUSD1	-6.48	0.00417
SV2A	-9.57	0.008174
SWI5	-6.71	0.0049
SYDE1	-6.04	0.008392
SYNE4	-5.87	0.003962
SYNGAP1	-4.69	0.009843
SYNGR2	-6.77	0.002903
SYNJ2	-6.47	0.003831
SYT12	-5.69	0.003858
SYT17	-4.81	0.009153
SYT5	-13.10	0.007473
SYT7	-6.45	0.002769
SYTL3	-5.51	0.005375
TACC1	-5.90	0.00429
TACO1	-4.67	0.009737
TAF1C	-5.24	0.009465

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
TAF4	-5.22	0.00682
TAF6	-5.60	0.00752
TAGLN2	-5.23	0.00704
TAOK2	-5.74	0.00547
TAZ	-5.41	0.00443
TBC1D2	-7.00	0.00114
TBC1D9B	-4.56	0.00949
TBCB	-5.37	0.00884
TBKBP1	-7.88	0.00309
TBL3	-7.40	0.00193
TCF25	-5.12	0.00849
TCF3	-6.26	0.00444
TCHP	-4.93	0.00989
TCIRG1	-6.55	0.00321
TCP11L1	-4.93	0.00538
TCTN2	-4.69	0.0057
TDG	-6.90	0.00336
TEAD3	-6.34	0.00409
TECPR1	-6.77	0.00144
TEF	-4.68	0.00589
TELO2	-5.17	0.00522
TENC1	-8.41	0.00095
TERT	-6.44	0.00158
TEX19	-5.53	0.00192

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
TEX21P	-8.33	0.004745
TEX22	-6.44	0.007332
TFDP1	-4.84	0.009371
TFP1	-7.23	0.004293
TFR2	-5.08	0.009672
TGM1	-7.88	0.006356
TGOLN2	-7.67	0.001057
THAP3	-4.40	0.007553
THAP7	-5.04	0.005675
THAP8	-5.83	0.003883
THBS1	-9.25	0.0009
THEM6	-4.59	0.008644
THRB	-6.82	0.005466
THSD4	-5.90	0.00641
TIAM1	-5.31	0.004917
TIGD5	-7.33	0.001299
TIMM23	-20.33	0.009997
TIMM44	-5.65	0.005278
TINAGL1	-8.82	0.001809
TJAP1	-6.03	0.005441
TK1	-6.55	0.004707
TM4SF19	-4.29	0.007027
TMBIM1	-10.25	0.001442
TMC4	-4.98	0.007009

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
TMC6	-6.20	0.00472
TMCC2	-5.47	0.00486
TMCO4	-7.02	0.00497
TMED1	-5.34	0.0081
TMEM120A	-6.28	0.00293
TMEM120B	-4.64	0.00448
TMEM125	-5.87	0.00706
TMEM129	-5.69	0.00581
TMEM132A	-6.14	0.00476
TMEM143	-6.04	0.00222
TMEM150A	-5.04	0.00343
TMEM151A	-6.28	0.00522
TMEM158	-6.21	0.00716
TMEM160	-7.59	0.00454
TMEM161A	-5.91	0.00497
TMEM175	-5.28	0.00531
TMEM177	-4.54	0.00553
TMEM181	-6.77	0.00341
TMEM184A	-6.56	0.00331
TMEM184B	-4.96	0.00912
TMEM200B	-5.64	0.00774
TMEM208	-5.28	0.00621
TMEM223	-4.56	0.00831
TMEM245	-5.64	0.00829

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
TMEM33	-5.89	0.007048
TMEM44	-4.92	0.00528
TMEM5	-5.84	0.006551
TMEM59L	-6.59	0.00271
TMEM64	-4.31	0.005125
TMEM8A	-6.74	0.003567
TMEM98	-5.94	0.004112
TMTC2	-8.82	0.001124
TMUB1	-6.62	0.0079
TMUB2	-5.05	0.007778
TNFRSF12A	-6.25	0.004069
TNFRSF21	-5.82	0.003675
TNFRSF25	-4.52	0.007644
TNIP2	-6.47	0.001954
TNNI1	-14.40	0.000575
TNNT1	-6.47	0.007037
TNRC18	-4.82	0.006716
TNS4	-7.57	0.00248
TOE1	-4.64	0.005763
TOMM40	-5.20	0.009124
TONSL	-5.56	0.005567
TOP1MT	-5.10	0.008978
TOR2A	-4.78	0.009861
TOR4A	-6.51	0.003574

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
TP53I13	-6.90	0.00388
TP73	-6.29	0.00444
TPGS1	-27.93	0.0011
TPI1	-10.23	0.0013
TPM2	-5.42	0.00932
TPRN	-5.47	0.00675
TRABD	-5.35	0.00756
TRAF1	-4.73	0.00909
TRAF2	-5.12	0.00588
TRAF3IP2	-5.69	0.00738
TRAF7	-4.68	0.00994
TRAM1	-6.80	0.00862
TRIM14	-5.15	0.00888
TRIM16L	-10.40	0.00138
TRIM25	-5.35	0.00641
TRIM39-RPP21	-4.45	0.00681
TRIM47	-6.18	0.00829
TRIM54	-5.09	0.00881
TRIM56	-6.11	0.00153
TRIM69	-4.82	0.00687
TRIML2	-4.30	0.00421
TRIOBP	-6.38	0.00419
TRIP6	-5.17	0.00538
TRMT2A	-7.13	0.00385

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
TRMT61A	-6.14	0.004645
TRPV3	-5.80	0.002552
TSEN34	-5.86	0.002507
TSEN54	-6.31	0.005857
TSPAN18	-5.63	0.004843
TSPAN33	-6.82	0.002719
TSPAN9	-4.99	0.008041
TSPO	-5.53	0.008761
TSR3	-4.09	0.009578
TSSC4	-6.65	0.00324
TST	-5.76	0.009599
TSTA3	-5.53	0.007776
TTLL3	-4.66	0.004281
TTPAL	-4.75	0.007284
TTYH2	-5.25	0.00655
TUBA4A	-5.51	0.00688
TUBB2A	-5.84	0.006701
TUBB3	-8.40	0.003222
TUBB4A	-5.52	0.00752
TUBB6	-6.22	0.004217
TUBBP5	-5.50	0.005907
TUBGCP2	-5.47	0.007241
TULP1	-7.40	0.004881
TUSC2	-5.61	0.003611

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
TXNDC5	-5.37	0.00636
TXNRD2	-5.03	0.00557
TYSND1	-4.76	0.00479
U2AF2	-6.05	0.00396
U47924.11	-9.50	0.0082
UBAC1	-5.30	0.00605
UBE2M	-5.52	0.00501
UBE2Z	-5.29	0.00701
UBTF	-5.32	0.00747
UCA1	-5.73	0.00753
UCKL1	-5.84	0.00313
UCP3	-12.02	6.9E-05
UFSP1	-5.03	0.00785
UGCG	-4.82	0.00886
UHRF1	-5.11	0.00901
ULBP3	-5.86	0.00814
UMPS	-5.00	0.00552
UNC119	-9.57	0.00259
UNC13A	-4.59	0.00698
UNC13D	-5.91	0.00681
UNC80	-7.23	0.00429
UNC93B1	-5.62	0.00601
UNK	-5.32	0.00454
UPB1	-6.73	0.00525

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
UPF1	-5.90	0.005772
UPP1	-4.35	0.007241
USF2	-5.74	0.004964
UVSSA	-4.31	0.009404
UXS1	-4.63	0.007148
VAMP1	-6.28	0.006053
VANGL2	-6.16	0.005313
VASH1	-7.23	0.003987
VASH2	-6.25	0.003003
VGf	-10.10	0.001658
VGLL3	-5.31	0.00437
VSIG2	-11.31	0.003253
VTA1	-6.16	0.008147
VTI1B	-5.99	0.004271
VWA1	-9.86	0.00039
VWA5B2	-9.65	0.003327
VWA7	-6.47	0.006023
WDFY1	-4.97	0.009396
WDR34	-4.30	0.009011
WDR53	-6.65	0.003968
WHSC2	-7.36	0.003058
WNK2	-5.09	0.00313
WNK4	-7.22	0.004947
WNT10B	-6.06	0.004598

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
WNT3	-5.86	0.0046
WNT3A	-5.23	0.00567
WNT7B	-6.38	0.0028
WTIP	-6.13	0.00241
XAB2	-5.93	0.00556
XBP1	-4.57	0.00445
XKRX	-7.26	0.00221
XRCC1	-5.19	0.00912
XRCC3	-5.85	0.00561
XXbac-BPG116M5.17	-12.79	0.00857
XYL2	-6.47	0.00349
YDJC	-8.90	0.0005
YIF1A	-4.85	0.00812
YIF1B	-5.10	0.00515
YIPF2	-7.22	0.00141
YIPF3	-4.65	0.00731
YJEFN3	-4.84	0.00598
YPEL3	-5.01	0.00907
ZBTB37	-5.60	0.00982
ZBTB45	-5.65	0.00564
ZBTB46	-5.72	0.00462
ZBTB47	-7.00	0.00967
ZBTB7B	-5.05	0.00847
ZBTB7C	-6.73	0.00525

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
ZBTB8A	-10.45	0.006551
ZC3H18	-5.62	0.002731
ZC3H3	-6.80	0.005318
ZC3H4	-5.44	0.006151
ZC3H7B	-4.90	0.009956
ZCCHC17	-5.11	0.008811
ZDHHC1	-6.40	0.00548
ZDHHC11	-9.36	0.002333
ZDHHC6	-4.97	0.008472
ZDHHC8	-6.11	0.005131
ZDHHC8P1	-6.38	0.004072
ZFP36	-5.45	0.00758
ZFP64	-5.30	0.00958
ZFPL1	-6.33	0.007752
ZFYVE27	-5.48	0.008595
ZFYVE28	-7.94	0.001064
ZGPAT	-6.01	0.004258
ZMIZ2	-5.70	0.005202
ZMYND19	-6.52	0.004353
ZNF155	-7.09	0.007576
ZNF184	-5.76	0.00829
ZNF219	-5.67	0.009216
ZNF251	-5.17	0.008709
ZNF276	-4.83	0.007156

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
ZNF333	-4.92	0.00875
ZNF335	-5.38	0.00588
ZNF341	-4.06	0.00956
ZNF394	-11.33	0.00381
ZNF414	-5.10	0.00709
ZNF469	-5.15	0.00998
ZNF48	-4.66	0.00977
ZNF503	-5.04	0.00694
ZNF512B	-5.04	0.00654
ZNF513	-5.71	0.00666
ZNF524	-8.34	0.00053
ZNF574	-5.06	0.00969
ZNF576	-6.17	0.00783
ZNF579	-7.96	0.00227
ZNF580	-4.79	0.00896
ZNF598	-5.66	0.00482
ZNF628	-6.53	0.00531
ZNF629	-4.91	0.00929
ZNF653	-11.22	0.00434
ZNF775	-5.92	0.00678
ZNF784	-5.14	0.0079
ZNF865	-7.50	0.00708
ZSCAN5A	-5.44	0.00402

Feature ID	Fold change (sihnRNP GT/Scramble)	P-value
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Table S3. List of mRNAs directly regulated by hnRNP G-T.

Feature ID	Fold change (IP; hnRNP GT/IP; IgG)	P value	Fold change (sihnRNP GT/Scramble)	P-value
ABC7-42389800N19.1	6.39	3.73146E-06	-5.69	0.003908767
ABCA2	5.10	0.003545883	-5.21	0.005871839
AC021218.2	4.04	0.007280056	-13.13	0.00042823
AC087650.2	7.56	0.008239248	-7.63	0.002736097
ADAMTS7	4.70	0.007765727	-5.91	0.008605485
AGRN	4.09	0.000983868	-7.51	0.000970639
AHRR	5.63	0.002545124	-5.76	0.002885284
AKAP2	4.92	7.54559E-06	-5.50	0.004980013
ANKRD19P	11.04	0.002747818	-5.19	0.009839099
ANO8	5.04	0.004347065	-5.39	0.004506253
ANO9	6.56	0.000170454	-5.43	0.005493351
APITD1	5.17	0.003911838	-6.30	0.00241544
ARHGAP8	5.08	0.001176519	-10.85	0.00506903
ARID1A	5.25	0.000774051	-4.66	0.009310173
ARL16	4.54	0.000634242	-4.14	0.007737237
ARMC3	9.46	0.007998225	-5.72	0.003674968
ARVCF	4.62	0.001227955	-6.43	0.004521733
ATG16L2	5.99	0.001671435	-6.90	0.00374116
B4GALT6	4.20	0.005491057	-5.47	0.007722423
BAHCC1	5.80	0.002269698	-6.92	0.002648263
BCAM	4.02	0.000523569	-11.44	0.004593292
BCOR	6.30	0.001430495	-5.20	0.00779122
BCS1L	4.74	0.000190188	-5.89	0.00426334
C17orf67	5.83	0.001817575	-5.49	0.00449762
C19orf66	9.17	0.002443223	-4.64	0.0075036
C1orf162	10.50	0.005610614	-7.23	0.00429312
C1QTNF6	6.12	0.006960065	-6.03	0.002895254
C2orf89	6.57	0.000408899	-4.77	0.006065301
CA5BP1	25.55	0.000238095	-5.94	0.002790824
CALD1	5.11	0.001197183	-6.26	0.006424718
CBLC	4.63	0.001275521	-6.85	0.005283662
CCDC130	5.96	0.000407353	-5.04	0.009823658
CCDC136	4.13	0.008277912	-8.33	0.002660342
CCDC57	8.09	0.000431778	-6.14	0.002506511
CCNE2	7.48	0.000415809	-5.92	0.00750193
CCNJ	7.60	0.002778813	-5.77	0.0099842
CDH24	6.06	0.004306873	-5.48	0.006739898
CDK10	5.66	0.003427487	-4.90	0.007981989

CDK11A	4.53	8.96702E-05	-5.44	0.006188506
CDK11B	4.99	0.001335735	-6.36	0.004059705
CENPT	5.16	0.000152879	-6.02	0.006899314
CHD5	5.53	0.002482999	-4.85	0.006493977
CLDND1	4.64	0.001366567	-6.75	0.002600844
CLSTN3	5.74	0.001703553	-6.37	0.005710446
COL27A1	4.72	0.008473254	-6.01	0.00628803
CPNE7	10.60	1.66177E-05	-6.80	0.002940604
CROCC	4.86	0.001228302	-6.11	0.003329917
CYP1A1	6.59	0.003139491	-7.58	0.002026477
CYP26B1	5.88	0.000647804	-7.74	0.005762872
CYP4F11	4.30	0.000347058	-6.91	0.001672288
DAB2	4.23	0.007022683	-5.07	0.00690058
DIP2C	5.01	0.00011751	-6.17	0.004773691
DOC2A	8.40	0.003967552	-4.58	0.008947461
DOC2B	4.64	0.00071582	-9.32	0.004039194
EIF2C2	4.52	0.009258765	-5.09	0.007754571
EIF5A2	4.93	0.00124463	-6.03	0.009570726
ELK3	4.29	0.002526749	-10.38	0.000998119
EMC9	4.41	0.003347271	-7.20	0.000967962
EML6	5.08	0.001340306	-5.80	0.004481116
ENO3	5.78	5.58681E-05	-6.81	0.008163466
EOGT	4.83	0.001235618	-5.83	0.007624579
EPHA10	4.86	0.005153934	-6.88	0.002702052
FAM156B	8.75	0.000770181	-8.73	0.000963009
FAM203A	4.26	0.002585247	-5.88	0.009045893
FAM206A	5.30	0.003821364	-8.02	0.003492432
FAM73B	6.17	0.000183026	-5.55	0.00661522
FER1L4	6.13	0.004546538	-9.11	0.001287855
FGFR1	5.22	0.000319955	-6.44	0.002969878
FLNB	4.54	0.007330391	-6.30	0.002820849
FOXD4	4.55	0.002738668	-5.91	0.006217325
GABRE	12.36	0.003247771	-4.68	0.008376706
GABRQ	4.75	0.002069972	-7.70	0.001661299
GAN	5.25	0.007043613	-6.75	0.005568832
GAS8	4.80	0.00532771	-5.41	0.006253269
GDA	4.64	0.000155144	-6.64	0.004754402
GDPGP1	5.30	0.007879634	-4.24	0.009360836
GGA1	4.69	0.000119737	-4.74	0.009558697
GLI4	11.28	0.000815295	-7.90	0.001371838

GNB1L	5.25	0.007669247	-6.58	0.008515377
GNB3	5.70	0.00361336	-5.63	0.005857185
GOLGA1	5.12	0.000185478	-5.92	0.003182242
GORASP1	4.33	0.008083959	-5.59	0.007073402
GUCY1B2	10.09	0.003510319	-7.71	0.00815311
GUSBP11	9.42	0.000239639	-5.14	0.005250695
GUSBP4_1	26.92	0.000743146	-7.44	0.008375994
HAPLN3	4.14	0.000138119	-11.35	0.007362616
HIVEP3	6.88	0.003071992	-4.65	0.006299425
HSD11B2	7.45	0.000181028	-6.23	0.006569039
HYAL3	6.13	0.000920211	-7.32	0.005275783
ICK	4.07	0.000871793	-4.74	0.00376905
IL18BP	9.45	0.000295314	-5.43	0.009894024
INPP5E	4.02	0.003596353	-5.67	0.009058583
TPR3	4.57	0.008458858	-5.69	0.006026865
KCNQ4	5.03	0.001708664	-5.48	0.005098289
KCTD15	4.71	0.002361684	-5.20	0.003748012
KIAA0284	5.26	0.002533628	-8.40	0.000784449
KIAA1737	11.44	0.001318939	-5.65	0.009060837
KIFC2	6.21	0.000493258	-4.11	0.006986517
KIRREL	4.96	0.000458738	-7.34	0.001748967
KLHL17	4.83	0.00028184	-9.36	0.001621747
KRI1	4.22	0.001364643	-5.87	0.002531799
KRT15	5.63	8.9569E-05	-6.13	0.006106353
KRTAP4-7	15.20	0.004498152	-7.26	0.00139098
LAMA5	7.33	4.97656E-06	-8.69	0.000571326
LENG8	5.69	0.000182171	-6.15	0.005692027
LRP4	4.59	0.004343043	-6.22	0.003574683
LRP8	4.41	2.37862E-05	-6.34	0.00300898
LRRC56	13.24	0.002813056	-8.55	0.003190395
LRRC58	4.70	0.004039822	-10.62	0.002576187
LZTS2	4.06	0.004435493	-4.22	0.008729579
MAPK12	4.15	0.002144135	-7.06	0.002232895
MAPK15	12.49	0.000983431	-9.66	0.001611988
MAPK8IP3	5.58	0.000216565	-6.05	0.004910773
MATN2	5.21	0.004256049	-7.66	0.003456072
MEGF8	5.21	0.005020704	-6.14	0.004020616
MICAL1	4.99	0.00138954	-4.45	0.008476417
MID1	5.70	1.72468E-05	-6.42	0.002381755
MMRN2	5.75	0.000239709	-5.80	0.003029859

MPRIP	4.21	0.004157072	-6.18	0.005763329
MRVI1	4.85	0.000113949	-5.92	0.002662279
MYH3	6.14	0.002598432	-7.40	0.002147754
MYT1	4.93	0.00199012	-7.10	0.000858038
NBEAL2	4.80	0.001139294	-5.72	0.008873297
NES	5.97	0.001124383	-7.94	0.001872835
NLGN2	4.53	0.000375688	-7.65	0.002003017
NPDC1	7.68	3.30282E-05	-5.34	0.006428827
NPIPL3	10.62	1.31668E-06	-7.86	0.002490704
NPR2	8.31	0.009570408	-5.71	0.007085806
NUP54	5.20	1.48617E-05	-4.83	0.009059953
ORAOV1	4.12	0.000360405	-4.98	0.004597792
PAPLN	6.73	0.002360159	-4.29	0.008906135
PASK	4.28	1.0129E-05	-5.43	0.006056586
PCDH7	8.05	0.00385605	-6.31	0.002415876
PCED1A	11.11	0.002054421	-7.46	0.007145145
PDLIM5	4.01	0.001914507	-4.74	0.009326716
PEAR1	6.66	0.00140848	-5.17	0.009493549
PEG10	7.11	0.002006661	-6.56	0.003380831
PIDD	4.17	0.003079429	-5.67	0.007199103
PITPNM2	6.00	0.003415459	-6.60	0.005226451
PKD1	7.42	0.003033117	-6.28	0.003074783
PLEKHG3	4.19	0.003280375	-5.19	0.007340356
PLEKHG4	6.20	4.47598E-05	-7.37	0.001994908
PLEKHG5	5.78	0.001300123	-5.65	0.00698293
PLXNA1	4.08	0.007383576	-6.31	0.005075839
PLXNB1	4.19	0.009881825	-4.98	0.007647056
PMFBP1	16.88	0.00075084	-7.21	0.005086987
PRR22	4.30	0.005833958	-8.00	0.002691097
PRRT3	4.59	0.006408787	-6.98	0.001294042
PRSS22	5.10	0.007930947	-8.88	0.003721513
PSMC3IP	5.09	0.000239299	-4.40	0.008616007
PTPN14	5.97	0.006074589	-6.24	0.002505078
PYGO1	5.35	0.008096052	-8.23	0.004545226
RNASEH2C	4.05	0.001543661	-6.21	0.0050508
RNF207	5.51	0.001897668	-5.29	0.004967561
RP11-1277A3.2	7.87	0.002666794	-4.85	0.007946772
RP11-213H15.3	24.15	0.001154671	-7.43	0.002347847
RP11-273B20.1	10.64	0.00081894	-12.70	0.000854316
RP11-365P13.3	7.85	0.004869166	-9.12	0.002947315

RP11-385D13.1	12.78	0.003403956	-11.81	0.000284309
RP11-431J24.2	9.78	0.001513532	-5.05	0.00886614
RP11-958N24.1	6.26	0.000270446	-9.86	0.000543827
RP4-785G19.5	7.62	0.000640957	-9.96	0.004738035
RPGRIP1L	7.01	8.58424E-05	-4.74	0.009517549
RRP7B	5.43	0.000167402	-4.82	0.005298732
RTEL1_1	4.89	0.000643089	-5.92	0.005488215
SCN5A	9.07	0.000122804	-5.14	0.006993315
SDHAP3	10.03	0.000361139	-4.10	0.007915005
SGSM2	6.47	0.00088222	-5.49	0.007298613
SH2B1	5.68	5.16662E-05	-5.29	0.009619292
SHANK3	5.76	0.005150603	-5.32	0.005703456
SHROOM3	4.56	0.005765305	-5.58	0.005105624
SLC17A9	5.01	0.001455494	-6.31	0.003667231
SLC23A2	4.31	0.004718537	-6.35	0.003123393
SLC26A11	4.00	0.005857981	-4.27	0.006825228
SLC37A1	4.11	7.0599E-06	-4.66	0.005972382
SLC38A7	4.78	0.004136078	-5.66	0.006575234
SLC45A3	4.34	0.00083317	-5.77	0.005516769
SLC4A11	4.00	0.0005723	-5.85	0.007192699
SMAD5	4.02	0.002762662	-5.78	0.008899506
SMARCC1	4.83	0.001352911	-6.01	0.005540581
SNAPC4	4.48	0.000635615	-6.50	0.003605896
SOGA1	4.85	0.008438803	-4.20	0.00732166
SOGA2	5.59	0.00216635	-6.09	0.004814985
SPAG1	4.39	0.004713529	-8.30	0.008510137
SPAG4	6.13	0.001471877	-4.10	0.007846862
SPECC1	5.94	3.21227E-05	-6.71	0.004125299
SPPL2B	6.61	0.001166136	-7.56	0.003137229
STX16	9.99	0.001406848	-5.54	0.009118949
SV2A	14.83	0.001813754	-9.57	0.00817388
SYNJ2	4.82	0.001054335	-6.47	0.003831167
SYT7	4.02	0.007203708	-6.45	0.002769115
TACC1	4.30	0.000201424	-5.90	0.004289648
TAF1C	5.15	0.000610191	-5.24	0.009465185
TBC1D2	4.34	0.003597782	-7.00	0.001140486
TCHP	4.35	0.002446191	-4.93	0.009892296
TCP11L1	4.07	0.001552889	-4.93	0.005381106
TERT	5.43	0.007735293	-6.44	0.001579398
THAP8	14.39	0.004934867	-5.83	0.003882685

THSD4	4.73	0.000908877	-5.90	0.006409675
TJAP1	5.26	0.002030793	-6.03	0.005440962
TMEM245	4.55	0.002569689	-5.64	0.008291833
TMEM44	4.10	0.000302551	-4.92	0.00528019
TMUB2	4.04	0.001456352	-5.05	0.007778441
TNFRSF25	6.10	0.006020365	-4.52	0.007643958
TNRC18	4.87	0.004714636	-4.82	0.006715796
TRIML2	6.83	0.007789881	-4.30	0.004211261
TTLL3	14.13	0.001302462	-4.66	0.004281044
TUBBP5	7.30	0.000235597	-5.50	0.00590701
ULBP3	7.71	0.001492836	-5.86	0.008139965
UNC13A	5.68	0.005698132	-4.59	0.006978989
UPP1	7.55	3.08823E-05	-4.35	0.007240969
VASH1	8.11	0.002772183	-7.23	0.003986967
VASH2	5.65	0.002135597	-6.25	0.003003477
WNK4	4.00	0.004154064	-7.22	0.004946978
ZBTB37	5.21	0.008226639	-5.60	0.009815461
ZDHHC11	9.59	0.005491665	-9.36	0.002332566
ZDHHC6	4.94	0.000309887	-4.97	0.00847208
ZDHHC8	6.28	0.000113661	-6.11	0.005130591
ZGPAT	5.08	0.001158354	-6.01	0.004258124
ZNF184	5.29	0.005501834	-5.76	0.008290129
ZNF251	6.66	0.001690363	-5.17	0.008708884
ZNF276	5.41	0.000409385	-4.83	0.007155742
ZNF341	6.47	0.009524251	-4.06	0.009562316

Table S4. List of mRNAs aberrantly expressed in ZDHHC11-downregulated cells.

Feature ID	Scramble vs siZDHHC11	
	Fold change	P-value
A1CF	4.039702706	0.026117803
A2M-AS1	-7.184364024	0.010703627
AAK1	-2.089160682	0.00015658
ABAT	-2.132787329	0.031211967
ABCA17P	9.068101518	0.015711025
ABCA7	-2.03986731	0.005906639
ABHD10	-3.129268245	1.12332E-07
ABI2	-2.519657139	0.000404226
ABO	-2.347082926	0.040827713
ABR	-2.03109656	6.92602E-06
AC003002.4	-2.416831844	0.006880809
AC005256.1	-2.260682174	0.021363788
AC007182.6	3.708126567	0.016266172
AC009005.2	-2.723895238	0.013955098
AC009410.1	-6.111880787	0.041372051
AC009948.5	-3.289890599	0.004590189
AC010894.3	-4.151914678	0.014930707
AC012363.4	-2.644059749	0.002786225
AC015688.3	-5.416593076	0.010068926
AC024560.2	-3.866739734	0.016091416
AC024937.4	5.052519128	0.02157728
AC062017.1	-5.660415889	0.002220775
AC084219.3	-5.070745425	0.041299468

Feature ID	Scramble vs siZDHHC11	
	Fold change	P-value
AC084809.2	-8.411920834	0.046293903
AC093627.10	-5.773544847	0.004545211
AC096772.6	-2.198082207	0.021341495
AC129778.2	-5.122355688	0.008325139
AC141928.1	-2.254200771	0.043513125
AC142528.1	-2.82687225	0.023473393
AC145124.2	-2.399247412	0.009401227
ACADSB	-2.651783936	5.81772E-05
ACBD4	-2.704474158	0.018298368
ACCS	-2.068427746	0.015974067
ACSS2	-2.051595403	0.000156903
ACTR1B	-2.406492481	0.000197844
ACTR3B	-2.22529064	8.46263E-05
ADAM8	-2.136242722	0.016438362
ADAMTS10	-2.836927396	0.006776728
ADAMTS13	-2.430087584	0.009558462
ADAMTS14	-2.00200346	0.00522071
ADCY6	-2.278413597	3.67926E-05
ADD3	-2.909281658	3.75112E-05
ADGRA2	-2.078918782	0.001894549
ADORA1	-2.102888243	0.015226364
ADORA2A	2.062616256	0.044614785
ADPRHL2	-2.62943487	3.12042E-07

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
AGER	-2.334558053	0.006294984
AK8	-2.817012331	0.02376836
AKAP3	-4.937031604	0.03209733
AKR1E2	-2.228048368	0.043125156
AKR7A2	-2.030711829	6.74469E-05
AKR7A3	-2.094505177	0.03056429
ALDH1A3	-2.130515591	9.62942E-07
ALDH1L1	-2.73960818	0.011187288
ALPK3	-2.890427385	0.008227732
AMN	-2.255390888	0.018220134
AMT	-2.189747084	0.046650622
ANKDD1B	-6.010443275	0.008328325
ANKLE1	-2.009688066	0.003814961
ANKRD20A1	-2.307246903	0.009603818
ANKRD46	2.591999829	0.00027826
ANO7P1	-2.267128668	0.030658809
ANO9	-2.133876787	0.028018376
ANXA6	-2.329755433	3.46847E-06
AP3D1	-2.40407551	2.04206E-05
APBB2	-2.724692355	1.2362E-05
APLF	-4.873949674	0.02812945
APLN	-2.416048513	0.008504482
APOBEC3G	-3.353299658	0.012648381
ARHGAP26	-2.255667961	8.37242E-06

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
ARHGAP39	-2.969884656	2.8802E-06
ARHGEF25	-2.225599594	0.006650615
ARHGEF40	-2.023816158	0.003173813
ARIH2OS	-3.086271999	0.046928265
ARMC12	-2.573455654	0.013464895
ARMC9	-2.04501215	7.25118E-05
ARNT2	-2.188586073	8.12278E-05
ARNTL	-2.071962838	0.000151335
ARPIN	-4.053749604	0.024241657
ARSA	-2.334879746	0.031919134
ARSI	-5.126496525	0.036879984
ART5	-2.081825518	0.031897624
ARX	4.267734167	0.00046318
ASF1B	-3.729446347	1.77765E-06
ATG16L2	-2.250462112	0.011078951
ATHL1	-2.067432295	0.015636987
ATL3	2.035550681	0.000434173
ATP2A1-AS1	-2.321016017	0.029565189
ATP2A3	-2.528702039	0.00014877
ATP6V0A2	-2.512268412	2.98423E-05
ATP6V0E2-AS1	-2.710622953	0.024484677
ATXN1L	-2.836988594	0.011806423
AVIL	2.211502706	0.011550889
AVL9	-2.951696862	7.8809E-05

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
B3GNT3	-2.133762949	0.000609737
B4GALNT1	-2.067730264	0.000326307
B4GALT1	-3.067687079	4.07849E-06
BAHCC1	-2.05565699	0.000513526
BAIAP2L2	-2.026907197	0.033117937
BBC3	2.906609714	2.42737E-05
BBS1	-2.230539512	0.024798788
BCAN	-2.140846328	0.000693697
BCKDHA	-2.05832408	0.007635637
BCL11A	-6.807615234	0.030643211
BCL6B	3.971071963	0.019465173
BHLHB9	-2.696628863	0.03464955
BMP2	2.518524636	0.038883466
BRCA1	-2.021821967	0.000919107
BTBD11	-2.091047889	0.005339386
BTBD8	-2.185442985	0.049881938
BTG2	5.656346805	4.83225E-05
BZRAP1	3.366456133	0.025704801
C10orf10	4.224783116	0.028432628
C11orf49	-2.0867294	0.000138753
C12orf49	-2.77258817	1.06076E-05
C12orf57	-2.215278143	2.44853E-05
C15orf52	-2.263246504	0.0080227
C16orf59	-2.058950447	0.000333258

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
C16orf93	-4.654406196	0.035385568
C17orf97	-2.411897469	0.005898506
C1orf145	-3.067286681	0.02345112
C1QTNF1	-4.558138552	0.002487164
C1QTNF6	-2.15362722	0.001349371
C1QTNF9B-AS1_1	-6.322255382	0.030590556
C1RL	-2.062243489	0.005103743
C1RL-AS1	-2.49098375	0.004590676
C22orf46	-2.374690937	0.000607545
C2orf68	-3.469499351	0.019231046
C5orf51	-2.049369329	0.000806624
C6orf223	-4.585983601	0.008550511
C6orf58	-3.40058044	0.019971791
C7orf55-LUC7L2	-2.577339435	2.76276E-07
C7orf61	2.688688188	0.001498937
C9orf173-AS1	-24.89353575	0.000926708
CAMK2B	-2.511620884	0.04277261
CAND1	-2.936371873	2.49789E-05
CARD14	-3.345678177	0.019700785
CARD8-AS1	-7.298120454	0.018328262
CARF	-3.937478969	0.028173688
CASC19	-7.673631106	0.017542814
CASC9	2.199711684	0.044375663
CBLB	-2.017649956	0.01390812

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
CBLN3	-4.619310573	0.007895594
CCDC116	-6.041507017	0.02378411
CCDC125	-2.336135181	0.001367915
CCDC136	-2.065408873	0.000672905
CCDC24	-2.536385578	0.004374369
CCDC40	-2.977838466	7.12817E-05
CCDC61	-2.032909928	0.000342484
CCDC92	-2.348955592	0.00037957
CCK	2.658443181	0.004371434
CCNI	-2.544080058	5.24842E-05
CD164L2	-3.4237427	0.016941699
CD5	-8.195930744	0.028499046
CDC14A	-2.123034319	0.002945338
CDC42BPB	-2.100353412	0.000225264
CDH23	-5.478575875	0.029760525
CDKN1A	4.258210894	3.59691E-05
CDR2L	-2.054599924	2.31363E-05
CDRT4	-4.704315014	0.001295789
CDS1	-2.464301517	1.07736E-05
CELF5	-2.289343054	0.000441602
CEP104	-2.210184655	2.73173E-06
CEP19	-4.65245499	0.004476765
CEP85L	2.049292585	0.001686398
CERK	-9.920903309	3.61791E-07

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
CERKL	-2.34269675	0.024556945
CFAP43	-2.229354709	0.002903246
CFAP46	-2.525484977	0.038210763
CFAP54	-7.298120454	0.018328262
CH17-189H20.1	-2.384817945	0.03492356
CH17-260O16.1	-2.78337847	0.028100077
CH507-145C22.3	2.03671429	0.040627599
CH507-42P11.8	2.321457474	0.000518983
CH507-528H12.1	-2.163671181	0.004349746
CHDH	-2.146030298	2.88789E-05
CHMP2A	-2.597356005	6.47665E-05
CHPF	-2.458852777	6.87241E-06
CHST12	-2.453401554	7.06183E-05
CHST14	-2.559384122	0.000119486
CHST2	-2.567406607	0.00799705
CIITA	7.41681682	0.004713527
CIZ1	-2.095906422	2.10138E-05
CLYBL	-2.210684833	0.002930554
CMPK2	-3.289689883	0.001684851
CMTM8	-2.074956548	0.000725028
CNPY4	-3.313058708	0.001683159
CORO1A	-2.370724534	0.034499459
CORO2B	-2.554946843	0.007492081
CPEB2	-2.449606113	0.008910831

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
CPEB3	2.041527367	0.003576978
CRAT	-2.667037844	0.000760324
CREG1	-2.063395897	0.000369919
CSTB	-4.456654703	1.55275E-06
CTB-102L5.4	-2.739828985	0.028821393
CTB-178M22.2	-5.109655642	0.038064393
CTB-5506.8	-2.954841666	0.007990107
CTB-96E2.3	2.617221304	0.028703409
CTC-260F20.3	2.23239581	0.000911289
CTC-524C5.2	8.068888303	0.0081285
CTC-559E9.6	2.426187545	0.029194524
CTD-2228K2.7	-4.771075957	0.010024273
CTD-2330K9.3	-2.73591249	0.027658153
CTD-2369P2.12	-2.770593169	0.004913197
CTD-2377D24.6	-2.687830951	0.039916311
CTD-2535L24.2	-2.19973838	0.026561107
CTD-2538C1.2	-5.788660265	0.00375715
CTD-2587H24.5	-2.058230679	0.037395002
CTD-2651B20.3	-3.837519922	0.015851161
CTD-3065J16.6	-5.052425054	0.014584712
CUEDC1	-2.131573414	2.09179E-05
CYB561D1	-2.098978616	0.004797283
CYB5D1	-2.097555001	0.002558209
CYGB	5.77162944	0.046173183

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
CYP24A1	-2.448383061	8.28618E-05
CYP26B1	-2.115361086	0.000330774
CYP27A1	-2.111078017	0.040484565
CYP2D8P	-3.221600765	0.021622441
CYP2E1	-10.19680449	0.026591197
CYP2U1	-5.714092208	0.001847171
CYP4V2	-2.242527291	0.004104693
DAXX	-2.329102946	2.78453E-05
DDX11L2	-2.339429469	0.011424176
DDX3Y	2.621696493	1.58597E-05
DENND5B-AS1	-4.451955024	0.049789504
DGCR5	-3.584427353	0.014572123
DGKE	3.744936412	3.16099E-07
DHCR24	-3.222641857	1.10634E-06
DHRS11	-2.601864144	5.54063E-05
DHRS3	-2.020167633	7.25009E-05
DHRS4-AS1	-2.073385105	0.000961536
DHX35	-2.324608885	0.000376805
DHX58	-2.615306667	0.036897692
DISC1	-2.505920778	0.006120517
DIXDC1	-2.024331349	9.38705E-05
DLG4	-3.740487518	0.002153744
DLGAP1-AS1	-3.362740796	0.002626485
DMBX1	-2.16463194	0.038387671

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
DNAAF5	-2.295671419	1.38609E-06
DNAH6	-2.376760886	0.02347116
DNAJC6	-3.416177657	6.3572E-05
DNM1P51	12.15160207	0.041195248
DPF3	-2.176849885	0.006819932
DSG2-AS1	-5.206045507	0.048076813
DUSP18	-3.293511553	0.00079411
DUSP2	2.992843173	6.03795E-05
DUXAP8_1	-2.722617561	0.000272157
DYRK3	-2.029728857	0.004457837
E2F5	-2.513142059	0.000373923
EDA	-2.20920297	0.022355597
EFCAB12	2.222969741	0.04011412
EFEMP2	-2.474125563	0.00529243
EFHC1	-2.219759573	0.016210088
EGFR	-2.831556499	7.52574E-06
EGR3	-2.295422544	0.007899144
EIF4A3	-3.359833103	1.90606E-06
ELFN1-AS1	-2.484095693	0.008360611
ELK4	-2.099634689	4.00073E-05
ELMSAN1	-2.004105042	3.54061E-08
EME2	-2.089226688	0.02630532
ENG	-4.835196586	0.002600233
ENGASE	-2.006427314	0.018454239

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
ENO3	-2.215709479	0.025230791
ENOSF1	-2.123965304	0.001878394
ENOX2	-2.037556357	1.87421E-05
ENTPD8	-3.148360974	0.01637811
EPHB2	-2.282146904	5.29456E-05
EPM2A	-2.634415654	0.019524339
EPOR	-2.338202697	6.10512E-05
EPS15	-4.241265343	5.06095E-06
ERBB3	-2.52737982	8.74571E-05
ERCC6L	-2.086521602	0.013119212
ERGIC1	-8.699909884	6.68137E-07
ERICH6-AS1	-3.762639182	0.002613496
ESRRB	-2.737065414	0.008946743
ETNK2	-2.894214597	5.08704E-05
ETV6	-2.923690507	0.000395467
EVI5L	-2.902541414	6.64541E-05
EXOC3L1	-4.53364758	0.018616594
F10	-2.061867452	0.035309596
FAAP24	-3.107206351	0.000212687
FADS1	-2.425879182	7.23671E-05
FAM120B	-2.070594327	0.000238697
FAM122B	-2.300912591	7.47837E-07
FAM126B	2.295349736	0.021077703
FAM167A	-2.009782855	0.014254556

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
FAM192A	-2.106315594	3.31875E-05
FAM219B	-2.112602388	0.02113313
FAM86B3P	-3.626499639	0.015664857
FAS	2.110587058	1.54124E-05
FAXDC2	2.770857568	0.000403733
FBXL20	-2.057591977	5.4644E-05
FBXO24	-3.672274016	0.026368317
FBXO27	-2.116130827	1.20436E-05
FBXO34	-2.048198681	0.000371014
FBXO48	-2.733071367	0.012655335
FBXW5	-2.616936375	1.7823E-07
FBXW7	2.165863415	1.46632E-05
FER1L4	-2.610120308	0.041847283
FEZF1-AS1	-2.039784986	0.049241039
FGF11	-2.049817436	0.022560724
FGFRL1	-2.225039529	7.52544E-05
FKBP1A	-2.669092328	1.66549E-05
FKBP9P1	-11.29559548	0.008144604
FLG-AS1	-2.630352135	0.02143624
FO538757.3	-5.196756358	0.04824573
FOXL1	-2.276933906	0.001835066
FOXN4	-4.438932661	0.045678706
FRAT1	-2.451723436	0.046852627
FRMPD2	-3.43376639	0.029433339

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
FSTL1	-2.402390289	1.55872E-05
FUT1	-2.605367864	2.10358E-05
FXYD5	-2.876708375	3.27175E-05
FZD2	-2.197986727	0.002987084
FZD4	-3.740861495	0.00209114
GABBR1	-2.193200605	0.026049928
GAL3ST3	-7.210495796	0.010091506
GALNT3	-5.306101262	9.15994E-05
GAS6-AS2	2.057937643	0.004114199
GATM	-3.116688374	0.006705419
GEN1	-2.371222556	0.005991922
GINS1	-2.621329755	0.000160396
GJB5	-2.937675057	0.012129806
GLCCI1	-2.492505658	0.003366178
GLI1	-2.745872829	0.000294241
GLI4	-3.003944065	9.68092E-05
GLRX	-2.283364572	0.000288735
GM2A	-2.453859819	8.52784E-05
GNA12	-2.108495565	9.80727E-05
GNAZ	-4.42957827	0.036973535
GNG5	-3.644296636	5.22106E-06
GPD1	-2.334320659	0.020121702
GPKOW	-2.225080013	9.59973E-06
GPRIN2	-2.120095911	0.027131892

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
GPRIN3	-4.701514969	0.002737
GRHL2	-2.066169638	0.000103688
GS1-124K5.4	-2.013770253	0.016729217
GSTT2	-2.160163016	0.00428214
GUCD1	-2.107373237	2.30029E-06
GYS1	-3.26500015	6.96963E-06
H1FX-AS1	-3.4798957	0.009864052
H2AFX	-2.045999221	1.78712E-05
H6PD	-2.503428238	3.56734E-05
HAGHL	-3.027210007	0.001009052
HAX1	-3.057947584	5.96616E-05
HCG27	-4.25427695	0.031048345
HCN4	-3.046247331	0.004734618
HDAC3	-2.88053777	3.23074E-05
HDAC5	-2.422001576	0.000344064
HERC2P10	-5.330082877	0.013954044
HERC2P4	-12.01807324	0.000502313
HES7	-5.210325616	0.048438915
HEXIM2	-2.098067265	0.001527447
HFE	-3.794516874	2.41951E-05
HIC2	2.329487623	0.000184091
HID1	-2.012996458	0.000446251
HIPK3	2.009172494	3.5632E-05
HLA-DMA	-2.562061958	0.015636487

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
HMGA2	3.05738341	2.86895E-05
HMG3-AS1	-3.069093008	2.9803E-05
HMSD	-2.717594818	0.029749786
HNF4G	-2.967570259	0.016017952
HOGA1	-3.637212967	0.030763816
HOTAIRM1	-4.499982124	7.35372E-05
HOXA1	-2.542447577	0.003024126
HOXA11-AS	-3.786194565	0.013772418
HPS3	-2.152532304	0.000312012
HR	-3.154340619	1.24863E-05
HRC	5.06198711	0.034527593
HRCT1	8.301231385	0.020141127
HSD17B1	-2.272943811	0.019418733
HSF4	-2.433667727	0.037758401
HSPA1A	2.553833589	0.000486172
HSPA1B	2.502525094	0.000132524
HYAL1	-2.419825213	0.006980258
HYLS1	-2.105467961	0.01507488
ICAM5	-2.04942466	0.005361059
IFI30	-7.856449507	0.007650681
IFI6	-4.715055988	3.96452E-05
IFIT5	-2.992731696	0.000570242
IFT80	-2.102824298	0.000419122
IGFLR1	-3.414271024	0.003924047

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
IKBKE	-2.138503393	0.016335841
IKZF3	3.01990805	0.036086621
IL11	-2.275560741	0.005211253
IL11RA	-2.308971643	0.009804544
IL23A	-2.455467067	0.034522485
IL27RA	-2.228472952	5.1227E-05
ILD1R1	-4.650095867	0.010315781
INPP5D	3.398891214	0.000166793
IPP	-3.166654193	0.001442024
IQSEC2	-2.011310681	0.000137451
ISOC2	-2.340184577	1.83432E-05
ITGA3	-2.572504752	5.08211E-06
ITGA5	-4.999901695	2.09311E-05
JAK3	-2.201851153	4.02581E-05
JUN	2.09342717	0.001063812
KATNB1	-2.343065951	1.14031E-05
KB-67B5.17	-4.100101608	0.045172791
KCNAB3	-3.414795853	0.002363628
KCNC1	-2.400201834	0.031979173
KCNK1	-2.022494948	0.001111716
KCNK15-AS1	-5.196756358	0.04824573
KCNN4	-2.464885594	0.000135167
KCNQ1	-2.093212933	0.032189385
KCNS3	-2.679649868	0.000175015

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
KCTD16	-10.9488691	0.008443699
KCTD2	-2.777963733	4.3687E-05
KDM2B	-2.185043532	1.03868E-05
KDM4D	-2.709392543	0.001080112
KIAA0040	-2.774528867	0.000263305
KIAA0355	-2.316127054	0.00051436
KIAA1324L	-2.295855606	0.000100335
KIAA1522	-4.172168032	2.01909E-05
KIAA1671	-2.236235322	5.21313E-05
KIAA1683	-2.624205944	0.031855478
KIF21B	-2.043872634	0.000393986
KLF11	2.738986308	0.000725462
KLF15	-2.308841486	0.000505328
KLHL10	5.015194533	0.044535026
KLHL13	-2.196931979	0.001244367
KLHL15	2.151897845	0.000105187
KLHL23	-2.014309323	1.97874E-05
KLHL24	-3.145066373	0.001408821
KLK1	-3.543589526	0.004984904
KLK10	-21.7428206	0.000153868
KLK5	-3.371947981	0.031781559
KLK6	-2.337999228	2.52463E-05
KLRG1	-2.032272483	0.001752855
KRBA2	-10.08275906	0.018907782

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
KRT13	-3.281791941	0.003809209
KRT15	-2.515463764	0.003348115
KRT222_2	-2.059233832	0.040975958
LA16c-306E5.2	-2.1326826	0.000225257
LAMA2	2.363385568	0.000327569
LAMP3	-2.120142779	0.001246846
LCA5L	-4.671917467	0.019460924
LEMD1	-2.646296992	0.01236181
LGALS7B	-5.115347222	0.032747685
LGI4	-7.137004964	0.001726456
LIF	-2.122476574	0.0003874
LIFR	-2.14951511	0.000294054
LIN28B	4.184426061	0.000498772
LINC00173	-3.133993921	0.039139654
LINC00326	-2.473753434	0.007490757
LINC00475	3.250597473	0.024510028
LINC00482	-4.373127327	0.004467617
LINC00491	2.90811355	0.026401831
LINC00518	-2.558282562	0.00656371
LINC00652	-3.087828257	0.034377754
LINC00659	-3.968846361	0.000607659
LINC00941	-2.654887114	0.00172452
LINC00974	11.08921585	0.02377347
LINC00982	-3.930173932	0.012775436

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
LINC01098	-3.05904993	0.010619459
LINC01270	-2.51212513	0.000203196
LINC01385	4.035145425	0.00527678
LINC01569	-4.229694659	0.003472901
LINC01573	-3.538100859	0.037320861
LINC01588	-2.136050313	0.003930173
LINC01604	-2.011578829	0.009709035
LL0XNC01-250H1	-4.426118896	0.021368551
LMNTD2	-2.247626971	0.019811346
LPIN2	-2.025719891	3.76915E-05
LPIN3	-2.604726791	0.007168754
LRG1	-7.948492115	0.005394319
LRRC16B	-3.233248952	0.030273365
LRRC26	-2.535445869	0.031507907
LRRC37BP1	-2.847989871	0.005286779
LRRC46	-3.421561747	0.046849563
LRRC56	-2.408928873	0.005596335
LRRC73	-2.057623636	0.041515261
LRTOMT	-2.023836111	0.006795988
LYN	-2.323667956	7.65352E-05
LZTS2	-2.156272076	0.000167755
MAFA-AS1	-5.227210989	0.004387939
MAGEA2	2.625394273	0.006231106
MAGEB17	-2.00148509	0.040828217

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
MAGI1	-3.47719908	5.96981E-06
MAGI2	-5.070745425	0.041299468
MAMDC4	-2.067323586	0.027906454
MAML3	-2.634065069	0.016806241
MAN2B2	-2.082433696	2.47952E-05
MAP3K11	-2.47722019	0.000192913
MAP3K14	2.403110462	5.6605E-05
MAP3K3	-3.881981228	1.22093E-05
MAP6D1	-2.170724086	0.000485349
MAPK15	-4.64108427	0.001876995
MBIP	-2.151377442	0.001072074
MBLAC2	-2.304671701	0.004031228
MBP	-2.027558286	0.000267355
MCM3	-2.215117718	2.3095E-07
MDGA1	-3.131269277	0.000731426
MDM2	2.125016716	1.14718E-05
MECOM	-2.215509832	0.002955942
MESP2	3.139440297	0.04379873
MF12	-2.305008168	4.88841E-05
MFSD2B	-4.134156652	0.031067866
MFSD7	-2.360116413	0.006682186
MGAT4B	-3.897735679	5.65524E-08
MGC32805	-2.26588018	4.20215E-05
MIR210HG	-2.736607463	0.046335932

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
MIR222HG	-2.111438226	0.039839324
MLLT3	-2.379375768	0.001959196
MLXIPL	-2.191295858	0.012894213
MLYCD	-2.510974611	0.033714993
MMP19	-2.650132455	0.026663739
MMP25	-2.397561976	0.002742017
MOB3B	-2.550925877	0.001658733
MOB3C	-2.6077012	0.008650523
MOGS	-2.041439893	3.80224E-05
MOSPD3	-4.498752467	2.84396E-05
MPDU1	-2.27516846	4.58303E-06
MPP1	-2.136024982	0.002031679
MPP2	-2.14648754	9.90228E-06
MPZ	-2.221852732	0.044847553
MRC2	-2.00287305	0.002455181
MRGBP	-2.000372765	2.45837E-05
MRPL10	-2.107001766	0.000255162
MSH5	-2.288339559	0.018129829
MTMR10	-2.132642471	0.000335353
MTMR9LP	-4.500775381	0.003819049
MTOR	-2.298695373	1.32996E-06
MTSS1L	-2.099772874	0.000314316
MUC1	-2.360039914	0.003689506
MUC19	6.407757977	0.000171782

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
MUC6	-4.101038548	0.049525799
MXRA8	-2.643335234	0.008490632
MYB	-3.584539731	0.000793778
MYEOV	-2.050844723	1.31474E-05
MYLIP	2.157741003	1.43767E-05
MYO9B	-2.272780201	3.40714E-05
MYPN	-2.909772169	0.033159171
MYRF	-2.613182666	0.000605555
MZF1	-2.655098831	0.026423564
NAALAD2	2.659433302	0.029450187
NDRG1	-3.434470099	1.45599E-05
NEAT1	-2.18920868	0.032437654
NEIL1	-2.474405525	0.011052528
NES	-2.311764708	0.000968838
NEU1	-2.019353405	7.08697E-05
NFIB	-2.238990398	0.000678632
NFKBIZ	-2.471606829	0.005947736
NFYC	-2.874393857	1.20922E-05
NICN1	-2.003390187	0.027990243
NKX2-1	-7.031371613	0.032848349
NKX3-2	-2.675795391	0.044374423
NLRC5	-2.923331166	0.006331094
NLRP4	-2.073362144	0.012590276
NME7	-2.803723548	0.000987001

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
NOL4L	-2.211477503	0.006737565
NOXA1	-2.416183357	0.000582827
NOXO1	-2.369510991	0.001002669
NOXRED1	-2.031063845	0.026681131
NPHP3	-2.556592202	0.000636054
NPPC	8.243590249	0.016554765
NRBP2	-2.392646087	0.02137747
NRSN2	-2.199368176	0.02249364
NSUN5P1	-2.054332194	0.019116415
NSUN5P2	-2.652332467	0.002800817
NTNG2	-2.567348636	0.014333261
NUDT16	-2.16148079	0.000518875
OAS3	-4.676723922	1.51481E-06
OCEL1	-3.565396399	5.23057E-06
OGDH	-2.041579741	4.33817E-06
OLMALINC	-2.70455583	0.000676563
OPN3	-2.064586121	0.003015634
OPRL1	-3.299787022	0.003137011
OSTC	-2.198136453	5.81005E-05
OXA1L	-2.301247633	6.18687E-05
PACIN1	-2.404726676	0.002797237
PADI3	-14.92932714	0.001210917
PAN2	-2.010303061	0.003032392
PAOX	-2.073742758	0.026127535

Feature ID	Scramble vs siZDHHHC11	
	Fold change	P-value
PAQR4	-2.999102916	0.000339666
PAQR6	-3.553051814	0.011708086
PAQR8	-2.269007638	0.007903134
PARP16	-2.541825384	0.001592718
PAXIP1-AS2	-2.381074568	0.004246651
PCBP1	-2.507947948	8.02343E-05
PCBP1-AS1	-2.511549206	4.53857E-05
PCOLCE	-2.163576098	0.000658024
PCSK4	-2.980128766	0.014681071
PDCD4-AS1	-7.298120454	0.018328262
PDE2A	-2.203549346	0.007974211
PDE6C	5.046781037	0.047803341
PDE6D	-2.141425024	0.000145254
PDZD7	-2.199076317	0.005027369
PER1	-2.525830963	0.000288236
PER3	2.323569703	3.25539E-05
PEX5L	-2.468849158	0.023715587
PGM2	-2.058832867	0.000209116
PHC1	-3.603642396	7.98116E-05
PHLDA3	2.850997171	1.94103E-06
PHTF2	-3.131513417	2.06283E-05
PIK3CD-AS2	-2.607612872	0.033443898
PIK3R3_1	2.569068458	7.38578E-05
PITPNM1	-2.143489167	0.001187072

Feature ID	Scramble vs siZDHHHC11	
	Fold change	P-value
PKIA	-6.420848372	0.0035847
PKN1	-2.089843949	4.25841E-06
PLA2G6	-2.167352611	0.003874902
PLCH2	-2.506516348	0.012502305
PLEKHG2	-2.066413985	0.001248038
PLXNA2	-4.113649819	0.035536689
PMS2P2	-3.214851261	0.008092215
PMS2P6	-2.731463022	0.019852822
PODXL2	2.640569931	0.000846604
POLDIP2	-3.096594401	7.7219E-07
POLH	2.085493904	0.00019006
POLR2C	-4.987795501	2.37146E-06
PPARA	-2.349111353	0.000597201
PPM1J	-2.632407004	0.002578936
PPM1M	-4.160558217	9.11452E-05
PPOX	-2.243575046	9.66045E-05
PPP1CB	-2.438697595	0.000220633
PPP1R11	-2.138542666	2.88094E-05
PPP2R1B	2.045258951	0.001968192
PPP2R3B	-2.180715604	0.010642987
PRDM1	2.848635319	0.008242586
PRICKLE1	-2.158755228	0.001995065
PRIM2	-3.552894386	1.37771E-05
PRKCG	-2.020264009	0.045110822

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
PROM2	-5.029979106	0.000122612
PRPH	-2.762610564	0.004993321
PRR7-AS1	-3.683567627	0.016822686
PRRT1	-2.54139426	0.006237082
PRRT2	-2.569566205	0.02116628
PRSS30P	-5.134112848	0.004152599
PSKH1	-2.052433894	0.001116416
PSMB8	-5.137297938	0.01973874
PSORS1C1	-2.3179407	0.011284476
PTCHD2	-2.529856137	0.02321316
PTHLH	2.470057565	0.024500816
PTK2	-2.472720857	8.59567E-06
PTPDC1	-2.09460736	0.009252362
PTPMT1	-2.925709273	0.00011006
PTPN6	-2.267220151	6.91818E-05
PTTG1IP	-2.128981889	3.30405E-05
PYCRL	-2.01371629	0.000119182
PYGO2	-2.073741918	8.58574E-06
QRICH1	-2.409705286	6.71383E-05
R3HDM1	-3.316141021	5.1421E-05
R3HDM2	-2.203330109	3.93008E-05
RAB26	-3.686454189	0.000917909
RAB30	2.312425543	8.67627E-05
RAB34	-8.273434741	0.00266816

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
RAB39A	16.20684217	0.002830033
RAB43	-2.451399583	0.038494977
RAB7B	-3.882156045	0.040999867
RASGRF1	-2.955698113	0.010780349
RBM38	-2.14610861	4.5486E-05
RBPMS2	-2.010396442	0.001391013
RCC2	-2.305941269	6.77839E-07
RCN1	-4.299942967	6.6014E-07
REEP1	-2.599986868	0.002186783
RELL1	-2.883567891	0.00045869
REPS2	-2.685038467	0.007126391
RFESD	-2.029020983	0.016455448
RGCC	-2.234692206	0.014262404
RGL3	-2.258600961	0.009802765
RGPD2	2.094266989	0.006764762
RHOBTB1	-2.645526278	0.019196284
RHPN1	-3.568847707	0.002013096
RIBC1	-4.534699973	0.040607504
RIMKLA	-2.526352534	0.0006952
RINL	-3.386410622	5.66955E-05
RIOK1	-2.245945099	0.000144969
RNF187	-2.002765157	0.000112691
RNF207	-2.12713288	0.023875553
RNF215	-2.070966351	0.000456757

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
RNF216P1	2.259464805	0.000602151
ROR2	-2.143468467	0.002473609
RP1-151F17.1	-2.548971825	0.005620723
RP1-90G24.6	-2.047303418	0.000826759
RP11-1008C21.2	-16.3127335	0.049704212
RP11-1055B8.4	-4.655987872	0.005590661
RP11-1060J15.4	2.417873503	0.00163573
RP11-1094H24.4	-3.606694642	0.015631606
RP11-10N23.5	-2.484295307	0.021367587
RP11-111M22.2	-2.141351455	0.008036908
RP11-126O1.5	-3.922293894	0.001296607
RP11-1379J22.2	5.07016731	0.04754877
RP11-148K1.12	-6.492865161	0.007113901
RP11-154J22.1	-4.553241951	0.008209477
RP11-161M6.2	-2.522293075	0.011759466
RP11-182J1.12	-4.210012245	0.026666934
RP11-201K10.3	2.211466676	0.015886749
RP11-228M15.1	-2.537060574	0.028594601
RP11-242D8.1	-2.206838677	0.046879431
RP11-253M7.1	-2.720055707	0.014029265
RP11-266K4.9	-3.816581638	0.038452461
RP11-268J15.5	-2.193509702	0.003748177
RP11-273G15.2	-14.22821186	0.028392835
RP11-284F21.7	-2.130015294	0.006842963

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
RP11-297P16.4	-2.362596634	0.004312389
RP11-30P6.6	-2.840925739	0.003177628
RP11-313J2.1	-4.943973806	0.041185384
RP11-324E6.6	8.119555298	0.031150042
RP11-325E5.1	3.189986133	0.013490946
RP11-400F19.8	-3.780335507	0.021805487
RP11-420A23.1	-4.28742684	0.001401421
RP11-428J1.5	-9.106819326	0.02271299
RP11-428O18.6	-4.540586267	0.011512619
RP11-431J24.2	-2.057565201	0.002840874
RP11-49I11.1	-2.683554355	0.026727856
RP11-49K24.6	2.519056741	0.042308159
RP11-529K1.4	-2.449576879	0.002690484
RP11-538I12.2	-3.018478097	0.044763163
RP11-544I20.2	-5.260089338	0.001046174
RP11-567M16.3	3.61913154	0.042581687
RP11-568K15.1	-2.009926131	0.002451646
RP11-571M6.7	2.883730131	0.019972996
RP11-574K11.31	-2.452421016	0.004864048
RP11-585P4.5	-3.416134713	0.02833914
RP11-597D13.9	3.381982365	0.046200031
RP11-618G20.1	6.258411726	0.002141497
RP11-620J15.3	-4.262819012	0.005263975
RP11-626G11.3	-3.276338043	0.041282689

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
RP11-666A8.8	3.535363766	0.038439666
RP11-677M14.7	-4.860108247	0.047774924
RP11-699L21.1	-4.943973806	0.041185384
RP11-705C15.2	-5.049546884	0.006512194
RP11-783K16.10	2.610422557	0.009210711
RP11-802E16.3	-2.7853647	0.042869852
RP11-809O17.1	-3.324403706	0.001998246
RP11-846F4.12	-4.577024991	0.002354779
RP11-872D17.8	-3.330705802	0.000500691
RP11-879F14.2	-3.396247296	0.031770336
RP11-883A18.3	2.458784595	0.036592326
RP11-92G12.3	-7.256485906	0.035327207
RP13-516M14.2	-3.654067622	0.010743528
RP13-650J16.1	-3.547938909	0.019747348
RP13-977J11.2	-2.230355384	0.019747843
RP3-402G11.26	-3.628708693	0.004113679
RP3-508I15.9	2.003448842	0.028598037
RP3-510D11.2	2.676376162	0.040246828
RP4-644L1.2	-9.883806288	0.02725842
RP4-777O23.3	-2.025659353	0.01301242
RP5-1028K7.2	-2.912115095	0.040791297
RP5-877J2.1	-2.831610826	0.008871808
RP5-955M13.4	-4.666957854	0.026127877
RP5-966M1.6	-2.628295079	0.046645963

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
RP6-65G23.3	-2.413034666	0.03240332
RPL3L	3.291368902	0.034318451
RPS6KA2	-3.489887526	0.000131794
RPS6KL1	-2.229907187	0.004345415
RSAD1	-2.395135322	3.32915E-05
RSG1	-2.075700607	4.49805E-05
RSPO4	-5.789504369	0.006023508
RTBDN	-2.23908534	0.033066142
RTEL1-TNFRSF6B	-2.664060731	0.008192244
RUNDC3A-AS1	-2.172895999	0.006084573
RWDD1	-2.94750115	6.6574E-05
SAMD15	-2.396636247	0.007991725
SAPCD2	-2.409243752	4.76201E-06
SBF2	-2.133122661	0.000848735
SCART1	-2.098859726	0.008585275
SCML2	3.499610524	0.00105581
SCN4A	-3.040503508	0.029739341
SCNN1A	-2.097961405	6.27316E-05
SCRN2	-2.184977548	0.001819579
SEC14L1	-2.252040126	1.29296E-05
SEC14L4	-2.313809859	0.001048133
SEL1L	-2.229562149	0.00024265
SEMA4F	-2.570072184	0.000757031
SEMA7A	2.144588708	0.000333997

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
SEPN1	-4.07174974	8.00155E-07
SEPT1	-2.297959816	0.032284926
SERPINA5	-4.85721732	0.004310976
SERPINB9P1	-10.42065123	0.018345151
SERPINF2	-2.42440635	0.04454325
SESN1	2.296608356	6.52717E-06
SESN2	2.578646735	3.10671E-07
SESN3	2.352282617	0.018086125
SFI1	-2.000422902	0.007861655
SGPP2	-2.135757848	0.007633163
SH2D5	-2.558157476	4.99263E-05
SH3D21	-2.343547345	0.009682532
SH3TC2	-2.152821314	6.55543E-05
SHC2	-3.325876295	0.001977358
SHPK	-2.127803623	0.004381771
SHROOM2	-2.452192938	0.000140935
SHROOM3	-3.435218114	6.59179E-06
SIGLEC10	-10.58500686	0.003824227
SIGMAR1	-2.901711759	1.37057E-06
SIK1	2.230829414	0.00054048
SIRT3	-2.404333722	0.000615443
SIX3	-2.28927194	0.022829635
SIX5	-2.127736699	0.001918208
SLC10A3	-3.038161085	0.000130828

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
SLC10A5	2.521003625	0.000266368
SLC16A8	-2.553508602	0.019282892
SLC1A1	-3.156846932	0.002349401
SLC22A31	-2.137548264	0.002302134
SLC25A23	-5.354960807	6.65536E-07
SLC25A29	-2.458390964	0.001245114
SLC25A42	-2.020040363	0.002245861
SLC27A1	-2.212436651	0.003461314
SLC27A3	-2.054592419	0.011305221
SLC29A3	-2.179874167	0.000599986
SLC2A3	2.169509771	0.00204346
SLC2A8	-2.263983003	0.000932779
SLC35E1	-4.128939827	1.02553E-05
SLC37A2	-3.043099596	0.000407078
SLC44A1	-2.850058972	1.35647E-05
SLC45A3	-2.399411167	0.000150305
SLC46A3	-2.493103424	0.023407273
SLC5A10	-10.31998126	0.002299875
SLFNL1	6.453852306	0.018147785
SLU7	-2.164168241	7.69189E-05
SLX1A	-2.865563643	0.017744978
SMAD7	2.362485341	0.00047985
SMARCD3	-2.524096121	0.000660508
SMARCE1	-3.200512699	1.00276E-06

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
SMPD3	-2.527126042	0.007405269
SNAPC3	-2.499694951	4.42644E-06
SNPH	-2.424557105	0.000545082
SNX19	-2.164378104	3.73887E-05
SNX22	-2.50645142	0.002226046
SNX29	-2.12217233	0.002579994
SOWAHA	-3.03212567	0.00617408
SOX13	-2.325713111	0.000164514
SP2	-2.160831889	4.69941E-06
SP5	2.613295872	0.004602139
SPATA17	-2.401835735	0.006122334
SPATA5	-2.035293648	8.8135E-05
SPATA6L	-2.033193257	0.012979944
SPATC1	-10.85974602	0.019076531
SPEF1	-2.802118923	0.034099357
SPOCK2	-2.856402459	0.013364636
SPTBN1	-2.111659883	3.36521E-05
SRMS	-3.041235329	0.000284718
SRP72	-2.001859649	2.07064E-05
SRPX	-3.010274358	0.000336308
SRRM2	-2.008719634	0.00081416
SSBP2	-4.171770019	0.000728309
SSPO	-2.906109343	0.039617691
SSX1	-5.117857009	0.008339865

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
ST3GAL1	-2.283601287	0.000190682
ST3GAL4-AS1	-2.422339883	0.002344894
ST3GAL5	-2.731571085	0.002461375
STARD4	-2.040298481	1.03713E-07
STARD5	-2.410060887	0.025300735
STKLD1	4.741408821	0.03921547
STMN1	-3.915809515	1.21538E-07
STX1B	-2.789585974	0.010658718
SUCO	-2.423011288	8.57368E-05
SVBP	-2.037673727	3.35229E-05
SWSAP1	-2.362087789	0.00947338
SYNE4	-2.073479052	0.00013229
SYT17	-2.5689428	0.00343816
TAB3-AS2	7.071784481	0.012150789
TACC1	-2.333662698	7.07364E-06
TADA3	-3.10959437	2.02715E-07
TBC1D2B	-2.390247271	0.000728145
TBC1D3	-2.214959102	0.029099073
TBCK	-2.057190226	0.000749377
TBX6	-4.102441328	0.01586908
TCERG1L	5.025903493	0.020820888
TCN1	-2.193927741	0.048333129
TCP11L2	-5.539080299	0.001666435
TCTN2	-2.444276102	0.001357668

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
TEX2	-2.402971052	5.23125E-06
TGFB2	2.172647058	0.016615032
TGFBI	3.850562953	0.015889354
THEM6	-3.436891685	7.65929E-05
TIAM1	-2.62241926	1.39345E-05
TIMELESS	-2.814888131	4.75154E-06
TIMM10B_2	-2.014863058	0.02018904
TIMM23	-2.127141998	2.50984E-05
TIMP1	-2.784018535	2.80982E-07
TINAGL1	-2.472671676	0.000148757
TJP2	-2.50741724	1.26684E-05
TK2	-2.234409522	0.001468682
TLR1	-2.095845162	0.008326534
TLR6	2.981178477	0.02936555
TM4SF19-AS1	-9.315616059	0.001340339
TMC5	-2.967718917	1.76185E-05
TMC6	-2.002933444	7.4693E-05
TMED8	-2.630229814	4.4876E-06
TMED9	-2.131994615	1.36733E-06
TMEM121	-2.105229551	0.000310395
TMEM125	-2.455369871	0.000750404
TMEM129	-2.828080886	0.000123533
TMEM134	-3.691172945	0.000289853
TMEM150A	-2.486309627	0.002183216

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
TMEM187	-2.938510644	0.000484258
TMEM198B	-2.668609675	0.010040063
TMEM2	-3.076966228	1.05353E-06
TMEM203	-2.129594776	2.29665E-05
TMEM254-AS1	-3.21161785	0.016053692
TMEM45B	3.358762374	0.02560004
TMEM74	-7.298120454	0.018328262
TMEM80	-2.304056265	0.030921017
TMEM91	-6.768701857	0.010779097
TMPRSS6	-15.70917268	0.013822699
TMSB15B	-18.7070237	0.023544303
TMX4	-2.532650428	0.003024464
TNFAIP2	-3.530926194	6.01175E-05
TNFRSF10D	3.257319336	1.24469E-05
TNFRSF13C	-2.722752242	0.031081725
TNFRSF8	-2.805882059	0.019435292
TNFSF4	-2.441362938	0.005049198
TNS2	-3.236457355	3.51518E-05
TNS4	-2.18343061	1.1125E-05
TOB2	-2.21745096	1.64591E-05
TOMM22	-3.543856149	5.30752E-07
TOMM34	-3.848308554	6.71891E-06
TP53INP1	2.790439578	5.81403E-05
TPTEP1	-2.051403733	0.01001303

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
TRIAP1	2.099256629	0.000106567
TRIM10	-2.354436982	0.006569198
TRIM2	-2.003771012	8.75677E-05
TRIM45	-2.447711809	0.000742028
TRIM62	-3.629232071	0.00013531
TRIM65	-2.933651816	3.30932E-05
TRIM66	-2.124278925	0.005547045
TRIM8	-2.01600162	1.48584E-05
TRPC1	-2.513230201	0.021648649
TRPT1	-2.268056317	0.000185657
TSPAN18	-2.76749356	0.03221948
TSSK3	-2.084206829	0.005485138
TTC7A	-2.40424403	0.000138912
TTL	-2.86955511	5.74224E-06
TTLL13P	2.975144663	0.048217344
TTPA	-2.087707016	0.023488276
TTY14	-9.202776326	0.011695999
TUBB3_1	-3.812750871	0.002089445
TUBB3_2	2.30689372	0.004099857
TXNDC11	-2.077022526	7.84466E-06
TXNDC5	-2.720035066	1.39164E-05
UAP1	-2.998015812	2.53535E-06
UBAC1	-2.038657328	1.40159E-06
UBC	-2.36377092	1.10977E-05

Feature ID	Scramble vs siZDHC11	
	Fold change	P-value
UBE2W	-2.032535113	0.007389778
UBFD1	-2.287086649	5.79737E-05
UBQLN1	-2.342385029	4.86662E-05
UBQLN2	-3.999722128	6.45682E-06
UBQLN4	-2.101424187	1.35362E-05
UBTD1	-3.567573189	0.000201511
UGT8	-2.006839127	0.000791606
UMAD1	-2.388757946	0.000554003
UNC13D	-2.096715391	0.001405145
UPK1A	-3.177203875	0.010239722
UPK3B	-2.357274688	0.022997065
USH1G	-2.447446892	0.018621788
USP46-AS1	-2.720084107	0.01354011
UTY	-2.098880571	0.013228883
VAMP2	-3.183810223	0.011213055
VANGL2	-2.20381135	0.029707834
VIPR1	-3.04455287	0.004036437
VWA5B2	-2.382796437	0.041010429
WBSCR16	-3.3472348	2.24843E-06
WBSCR27	-2.323417452	0.000111997
WBSCR28	3.156519613	0.031757841
WNK4	-2.287447784	0.000169217
WNT6	-2.407017733	0.023673001
WNT7B	-2.122671513	0.000103992

Feature ID	Scramble vs siZDHHHC11	
	Fold change	P-value
WSB2	-2.592707991	8.61115E-07
XXbac-BPG181M1	-5.196756358	0.04824573
YBX2	2.258740957	0.009408932
ZAP70	-3.404408646	0.04487217
ZBTB25	-2.018577944	0.001509359
ZC2HC1C	-2.238019694	0.012689185
ZC3H10	-2.500687155	0.030499157
ZC3H6	-2.875952114	0.003636919
ZDHHHC24	-2.284540586	0.00026753
ZFP91	2.037889969	0.025266121
ZFPL1	-2.483618878	3.02423E-05
ZFYVE28	-2.618257696	0.000997558
ZMYND15	-4.720449685	0.000187754
ZNF318	-2.139018273	8.19824E-05
ZNF324	-2.170090326	0.000871225
ZNF324B	-2.083846326	0.003077111
ZNF358	-14.42254367	2.263E-05
ZNF362	-4.525335129	4.69437E-05
ZNF394	2.166266894	0.005548009
ZNF41	-2.118153922	0.00034233
ZNF473	2.089760399	0.000302379
ZNF488	-2.100233486	0.019986282
ZNF497	-4.638738611	0.024229656
ZNF629	-2.96503554	1.15636E-06

Feature ID	Scramble vs siZDHHHC11	
	Fold change	P-value
ZNF70	-2.2611853	0.003449506
ZNF721	2.494216986	0.000697092
ZNF74	-2.350308458	0.000315335
ZNF778	-2.388783908	1.16644E-05
ZNF837	-2.899644217	0.043193632
ZNF862	-2.339030771	0.000151693
ZNF888	-8.19806698	0.009518826

Table S5. List of top 10 pathways regulated by ZDHHC11.

#	Maps	FDR	P-value
1	DNA damage_ATM/ATR regulation of G1/S checkpoint	4.627E-04	3.738E-07
2	Chemotaxis_Lysophosphatidic acid signaling via GPCRs	2.874E-03	4.644E-06
3	Proteolysis_Putative SUMO-1 pathway	5.671E-03	1.440E-05
4	Immune response_BAFF-induced non-canonical NF-kB signaling	5.671E-03	1.832E-05
5	TGF-beta signaling via kinase cascades in breast cancer	9.115E-03	3.906E-05
6	Immune response_IFN-alpha/beta signaling via MAPKs	9.115E-03	4.442E-05
7	DNA damage_p53 activation by DNA damage	9.115E-03	5.154E-05
8	Oxidative stress_ROS-induced cellular signaling	1.015E-02	6.557E-05
9	DNA damage_Role of SUMO in p53 regulation	1.096E-02	9.152E-05
10	Cell cycle_Regulation of G1/S transition (part 1)	1.096E-02	9.308E-05

Table S6. List of mRNAs aberrantly expressed by the downregulation of ZDHHC11

Feature ID	Scramble vs siZDHHC11 Fold change	P-value
BTG2	5.656346805	4.83225E-05
p21	4.258210894	3.59691E-05
Chk2	-2.464301517	1.07737E-05
PER3	2.323569703	3.25539E-05
FBXW7	2.165863415	1.46632E-05
PP2A regulatory	-2.180715604	0.01064299
MDM2	2.125016716	1.14718E-05
Histone H2AX	-2.045999221	1.78712E-05
PP2A structural	2.045258951	0.001968192
Brca1	-2.021821967	0.000919107