

**S16 Table. The overlapped genes between differentially expressed genes in RNA-seq and miRNAs' predicted target genes in miRNA-seq.**

Gene ID	Gene Symbol	Gene Annotation
GS_000169	RGS8	sp Q6DGI0 RGS8_DANRE Regulator of G-protein signaling 8 OS=Danio rerio GN=rgs8
GS_000465	CO1A2	sp Q28668 CO1A2_RABIT Collagen alpha-2(I) chain (Fragment) OS=Oryctolagus cuniculus
GS_000622	MUCM	sp P23735 MUCM_ICTPU Ig mu chain C region membrane-bound form OS=Ictalurus punctatus
GS_000805	-	-
GS_000806	-	-
GS_000869	MAR1	sp Q16655 MAR1_HUMAN Melanoma antigen recognized by T-cells 1 OS=Homo sapiens GN=MLANA
GS_001154	KIF5C	sp O60282 KIF5C_HUMAN Kinesin heavy chain isoform 5C OS=Homo sapiens GN=KIF5C
GS_001157	ABP1	sp P36633 ABP1_RAT Amiloride-sensitive amine oxidase [copper-containing] OS=Rattus norvegicus GN=Abp1
GS_001591	NKX11	sp Q15270 NKX11_HUMAN NK1 transcription factor-related protein 1 OS=Homo sapiens GN=NKX1-1
GS_001664	CYTSA	sp Q2KN97 CYTSA_CHICK Cytospin-A OS=Gallus gallus GN=SPECC1L
GS_001783	KNG	sp P83857 KNG_ANAMI Kininogen (Fragments) OS=Anarhichas minor
GS_002043	MITF	sp O75030 MITF_HUMAN Microphthalmia-associated transcription factor OS=Homo sapiens GN=MITF
GS_002131	MSTN1	sp Q05AX4 MSTN1_XENLA Musculoskeletal embryonic nuclear protein 1 OS=Xenopus laevis GN=mustn1
GS_002188	AQP7	sp O54794 AQP7_MOUSE Aquaporin-7 OS=Mus musculus GN=Aqp7
GS_002614	GPR21	sp Q99679 GPR21_HUMAN Probable G-protein coupled receptor 21 OS=Homo sapiens GN=GPR21
GS_002681	DRD5L	sp P53454 DRD5L_TAKRU D(5)-like dopamine receptor OS=Takifugu rubripes GN=dl
GS_002818	POL	sp O92815 POL_WDSV Gag-Pol polyprotein OS=Walleye dermal sarcoma virus GN=gag-pol
GS_002994	CRP	sp Q07203 CRP_XENLA C-reactive protein OS=Xenopus laevis GN=crp
GS_003073	HSP70	sp P08108 HSP70_ONCMY Heat shock cognate 70 kDa protein OS=Oncorhynchus mykiss GN=hsc71
GS_003590	PMEL	sp Q98917 PMEL_CHICK Melanocyte protein PMEL OS=Gallus gallus GN=PMEL
GS_003635	PDIA1	sp P09102 PDIA1_CHICK Protein disulfide-isomerase OS=Gallus gallus GN=P4HB
GS_003739	BDH	sp P29147 BDH_RAT D-beta-hydroxybutyrate dehydrogenase, mitochondrial OS=Rattus norvegicus GN=Bdh1
GS_003949	S47A1	sp A4IIS8 S47A1_XENTR Multidrug and toxin extrusion protein 1 OS=Xenopus tropicalis GN=slc47a1
GS_004023	ARF6	sp Q9Y7Z2 ARF6_SCHPO ADP-ribosylation factor 6 OS=Schizosaccharomyces pombe (strain 972 / ATCC 24843) GN=arf6
GS_004597	MREG	sp Q6GQM0 MREG_DANRE Melanoregulin OS=Danio rerio GN=mreg
GS_005047	F123A	sp Q9TUM6 PLIN2_BOVIN Perilipin-2 OS=Bos taurus GN=PLIN2
GS_005244	-	-
GS_005575	NCF1	sp O77774 NCF1_BOVIN Neutrophil cytosol factor 1 OS=Bos taurus GN=NCF1
GS_005670	EZRI	sp P15311 EZRI_HUMAN Ezrin OS=Homo sapiens GN=EZR
GS_005871	REP15	sp Q6BDI9 REP15_HUMAN Rab15 effector protein OS=Homo sapiens GN=REP15
GS_005902	GCH1	sp O61573 GCH1_OSTOS GTP cyclohydrolase 1 OS=Ostertagia ostertagi GN=gch
GS_005903	GCH1	sp O61573 GCH1_OSTOS GTP cyclohydrolase 1 OS=Ostertagia ostertagi GN=gch
GS_005905	GILT	sp Q499T2 GILT_RAT Gamma-interferon-inducible lysosomal thiol reductase OS=Rattus norvegicus GN=Ifi30

GS\_006243 S6A13 sp|A5PJX7|S6A13\_BOVIN Sodium- and chloride-dependent GABA transporter 2 OS=Bos taurus GN=SLC6A13  
GS\_006323 DLRB2 sp|Q32P85|DLRB2\_BOVIN Dynein light chain roadblock-type 2 OS=Bos taurus GN=DYNLRB2  
GS\_006488 P2RY8 sp|Q5ZI82|P2RY8\_CHICK P2Y purinoceptor 8 OS=Gallus gallus GN=P2RY8  
GS\_006925 PGS1 sp|P21810|PGS1\_HUMAN Biglycan OS=Homo sapiens GN=BGN  
GS\_006975 GLRK sp|P19439|GLRK\_CHICK Probable glutamate receptor OS=Gallus gallus GN=KBP  
GS\_007052 DYR sp|P09503|DYR\_SHV21 Viral dihydrofolate reductase OS=Saimiriine herpesvirus 2 (strain 11) GN=DHFR  
GS\_007314 GRN sp|P28799|GRN\_HUMAN Granulins OS=Homo sapiens GN=GRN  
GS\_007375 S22A7 sp|Q3YAW7|S22A7\_RABIT Solute carrier family 22 member 7 OS=Oryctolagus cuniculus GN=SLC22A7  
GS\_007378 MC1R sp|P55167|MSHR\_CHICK Melanocyte-stimulating hormone receptor OS=Gallus gallus GN=MC1R  
GS\_007378 MSHR sp|P55167|MSHR\_CHICK Melanocyte-stimulating hormone receptor OS=Gallus gallus GN=MC1R  
GS\_007481 KCC1G sp|Q7TNJ7|KCC1G\_RAT Calcium/calmodulin-dependent protein kinase type 1G OS=Rattus norvegicus GN=Camk1g  
GS\_007697 SOSD1 sp|Q9CQN4|SOSD1\_MOUSE Sclerostin domain-containing protein 1 OS=Mus musculus GN=Sostdc1  
GS\_007760 CP26C sp|Q6V0L0|CP26C\_HUMAN Cytochrome P450 26C1 OS=Homo sapiens GN=CYP26C1  
GS\_008156 CHLE sp|Q03311|CHLE\_MOUSE Cholinesterase OS=Mus musculus GN=Bche  
GS\_008205 FXI1C sp|Q8JIT5|FXI1C\_XENLA Forkhead box protein I1c OS=Xenopus laevis GN=foxi1c  
GS\_008220 AHNK sp|Q09666|AHNK\_HUMAN Neuroblast differentiation-associated protein AHNAK OS=Homo sapiens GN=AHNAK  
GS\_008287 PRS35 sp|Q5E9X7|PRS35\_BOVIN Inactive serine protease 35 OS=Bos taurus GN=PRSS35  
GS\_008590 FICA sp|Q9YGN5|FICA\_AGKHB Salmorin subunit A OS=Agkistrodon halys brevicaudus  
GS\_008611 ADRB1 sp|O42574|ADRB1\_XENLA Beta-1 adrenergic receptor OS=Xenopus laevis GN=adrb1  
GS\_008748 GCH1 sp|P48596|GCH1\_DROME GTP cyclohydrolase 1 OS=Drosophila melanogaster GN=Pu  
GS\_008785 CAH4 sp|P48283|CAH4\_RABIT Carbonic anhydrase 4 OS=Oryctolagus cuniculus GN=CA4  
GS\_009046 KITA sp|Q8JFR5|KITA\_DANRE Mast/stem cell growth factor receptor kita OS=Danio rerio GN=kita  
GS\_009380 FRPA sp|Q9K0K9|FRPA\_NEIMB Iron-regulated protein frpA OS=Neisseria meningitidis serogroup B GN=frpA  
GS\_009467 TNNT2 sp|P02642|TNNT2\_CHICK Troponin T, cardiac muscle isoforms OS=Gallus gallus GN=TNNT2  
GS\_009601 PLD3A sp|A5D6R3|PLD3A\_DANRE 1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase delta-3-A OS=Danio rerio GN=plcd3a  
GS\_009938 DHB14 sp|Q9BPX1|DHB14\_HUMAN 17-beta-hydroxysteroid dehydrogenase 14 OS=Homo sapiens GN=HSD17B14  
GS\_010021 PHOP1 sp|Q6DBV4|PHOP1\_DANRE Probable phosphatase phospho1 OS=Danio rerio GN=phospho1  
GS\_010174 LYG sp|Q90VZ3|LYG\_PAROL Lysozyme g OS=Paralichthys olivaceus  
GS\_010268 VEGFAA sp|O73682|VGFAA\_DANRE Vascular endothelial growth factor A-A OS=Danio rerio GN=vegfaa  
GS\_010295 MMP9 sp|P41245|MMP9\_MOUSE Matrix metalloproteinase-9 OS=Mus musculus GN=Mmp9  
GS\_010316 GPR61 sp|Q9BZJ8|GPR61\_HUMAN Probable G-protein coupled receptor 61 OS=Homo sapiens GN=GPR61  
GS\_010330 CAH6 sp|Q865C0|CAH6\_CANFA Carbonic anhydrase 6 OS=Canis familiaris GN=CA6  
GS\_010503 - -  
GS\_010525 FABPI sp|Q56JX9|FABPI\_BOVIN Fatty acid-binding protein, intestinal OS=Bos taurus GN=FABP2  
GS\_011013 HEBP2 sp|Q9Y5Z4|HEBP2\_HUMAN Heme-binding protein 2 OS=Homo sapiens GN=HEBP2  
GS\_011014 - -  
GS\_011090 RAP1GAP sp|P47736|RPGP1\_HUMAN Rap1 GTPase-activating protein 1 OS=Homo sapiens GN=RAP1GAP

GS\_011506 ARG33 sp|Q8BW86|ARG33\_MOUSE Rho guanine nucleotide exchange factor 33 OS=Mus musculus GN=Arhgef33  
 GS\_011788 - -  
 GS\_011843 GNS sp|P50426|GNS\_CAPHI N-acetylglucosamine-6-sulfatase OS=Capra hircus GN=GNS  
 GS\_012001 PLIN2 sp|Q99541|PLIN2\_HUMAN Perilipin-2 OS=Homo sapiens GN=PLIN2  
 GS\_012029 TYRP1 sp|P55028|TYRP1\_CARAU 5,6-dihydroxyindole-2-carboxylic acid oxidase OS=Carassius auratus GN=tyrp1  
 GS\_012394 K1B27 sp|Q9JM71|K1B27\_MOUSE Kallikrein 1-related peptidase b27 OS=Mus musculus GN=Klk1b27  
 GS\_012501 BMP1 sp|P98063|BMP1\_MOUSE Bone morphogenetic protein 1 OS=Mus musculus GN=Bmp1  
 GS\_012545 K1C17 sp|A5A6M0|K1C17\_PANTR Keratin, type I cytoskeletal 17 OS=Pan troglodytes GN=KRT17  
 GS\_012647 EDNRB sp|Q9N0W7|EDNRB\_RABIT Endothelin B receptor OS=Oryctolagus cuniculus GN=EDNRB  
 GS\_012661 SOX10 sp|Q9W757|SOX10\_CHICK Transcription factor SOX-10 OS=Gallus gallus GN=SOX10  
 GS\_013015 PE2R3 sp|P46069|PE2R3\_RABIT Prostaglandin E2 receptor EP3 subtype OS=Oryctolagus cuniculus GN=PTGER3  
 GS\_013228 GCH1 sp|O61573|GCH1\_OSTOS GTP cyclohydrolase 1 OS=Ostertagia ostertagi GN=gch  
 GS\_013252 SATT sp|O35874|SATT\_MOUSE Neutral amino acid transporter A OS=Mus musculus GN=Slc1a4  
 GS\_013312 DFP sp|Q86RS3|DFP\_MANSE Putative defense protein Hdd11-like OS=Manduca sexta  
 GS\_013459 SIX3 sp|O95343|SIX3\_HUMAN Homeobox protein SIX3 OS=Homo sapiens GN=SIX3  
 GS\_013586 RASEF sp|Q08CX1|RASEF\_XENTR Ras and EF-hand domain-containing protein OS=Xenopus tropicalis GN=rasef  
 GS\_013618 PRDM1 sp|Q60636|PRDM1\_MOUSE PR domain zinc finger protein 1 OS=Mus musculus GN=Prdm1  
 GS\_013701 RASFA sp|B1A193|RASFA\_XENLA Ras association domain-containing protein 10 OS=Xenopus laevis GN=rassf10  
 GS\_014186 MSLNL sp|Q96KJ4|MSLNL\_HUMAN Mesothelin-like protein OS=Homo sapiens GN=MSLNL  
 GS\_014384 RETST sp|Q5BLE8|RETST\_DANRE Putative all-trans-retinol 13,14-reductase OS=Danio rerio GN=retsat  
 GS\_014478 TBX19 sp|Q5XNS0|TBX19\_CANFA T-box transcription factor TBX19 OS=Canis familiaris GN=TBX19  
 GS\_014490 XDH sp|P47989|XDH\_HUMAN Xanthine dehydrogenase/oxidase OS=Homo sapiens GN=XDH  
 GS\_014502 CDK15 sp|Q1RLU9|CDK15\_DANRE Cyclin-dependent kinase 15 OS=Danio rerio GN=cdk15  
 GS\_014594 FCAMR sp|Q2TB54|FCAMR\_MOUSE High affinity immunoglobulin alpha and immunoglobulin mu Fc receptor OS=Mus musculus GN=Fcamr  
 GS\_014684 GTR5 sp|Q5RET7|GTR5\_PONAB Solute carrier family 2, facilitated glucose transporter member 5 OS=Pongo abelii GN=SLC2A5  
 GS\_014685 GTR5 sp|Q9WV38|GTR5\_MOUSE Solute carrier family 2, facilitated glucose transporter member 5 OS=Mus musculus GN=Slc2a5  
 GS\_014776 PCD10 sp|Q9P2E7|PCD10\_HUMAN Protocadherin-10 OS=Homo sapiens GN=PCDH10  
 GS\_015091 PCDH10 sp|Q3U6Q4|PCD10\_HUMAN Protocadherin-10 OS=Homo sapiens GN=PCDH10  
 GS\_015155 PCDH9 sp|Q9HC56|PCDH9\_HUMAN Protocadherin-9 OS=Homo sapiens GN=PCDH9  
 GS\_015243 VTCN1 sp|Q501W4|VTCN1\_RAT V-set domain-containing T-cell activation inhibitor 1 OS=Rattus norvegicus GN=Vtcn1  
 GS\_015700 DMBT1 sp|Q8CIZ5|DMBT1\_RAT Deleted in malignant brain tumors 1 protein OS=Rattus norvegicus GN=Dmbt1  
 GS\_015726 RFT2 sp|B5X4H8|RFT2\_SALSA Riboflavin transporter 2 OS=Salmo salar GN=rft2  
 GS\_015779 CA216 sp|Q52KN3|CA216\_XENLA UPF0500 protein C1orf216 homolog OS=Xenopus laevis  
 GS\_016285 S10I sp|Q91061|S10I ICTPU Ictacalcin OS=Ictalurus punctatus  
 GS\_016413 C1ORF106 sp|Q3KP66|CA106\_HUMAN Uncharacterized protein C1orf106 OS=Homo sapiens GN=C1orf106  
 GS\_016685 MSMB sp|O02826|MSMB\_PIG Beta-microseminoprotein OS=Sus scrofa GN=MSMB  
 GS\_016790 AHI1 sp|Q8N157|AHI1\_HUMAN Joubertin OS=Homo sapiens GN=AHI1

GS_016931	TAC2N	sp Q8N9U0 TAC2N_HUMAN Tandem C2 domains nuclear protein OS=Homo sapiens GN=TC2N
GS_017127	CCD18	sp Q5T9S5 CCD18_HUMAN Coiled-coil domain-containing protein 18 OS=Homo sapiens GN=CCDC18
GS_017738	NPDC1	sp Q9NQX5 NPDC1_HUMAN Neural proliferation differentiation and control protein 1 OS=Homo sapiens GN=NPDC1
GS_017984	LIX1	sp Q8UVV7 LIX1_CHICK Protein limb expression 1 OS=Gallus gallus GN=LIX1
GS_017985	CCD42	sp A6QQM8 CCD42_BOVIN Coiled-coil domain-containing protein 42A OS=Bos taurus GN=CCDC42
GS_018185	HAVR1	sp Q5QNS5 HAVR1_MOUSE Hepatitis A virus cellular receptor 1 homolog OS=Mus musculus GN=Havcr1
GS_018226	ES1	sp P30042 ES1_HUMAN ES1 protein homolog, mitochondrial OS=Homo sapiens GN=C21orf33
GS_018359	EDNRB	sp Q9N0W7 EDNRB_RABIT Endothelin B receptor OS=Oryctolagus cuniculus GN=EDNRB
GS_018739	EPD	sp P38528 EPD_CYPICA Ependymin OS=Cyprinus carpio GN=epd
GS_018934	RGR	sp P47804 RGR_HUMAN RPE-retinal G protein-coupled receptor OS=Homo sapiens GN=RGR
GS_019376	HS3S6	sp Q5GFD5 HS3S6_MOUSE Heparan sulfate glucosamine 3-O-sulfotransferase 6 OS=Mus musculus GN=Hs3st6
GS_019504	TRPC2	sp Q9R283 TRPC2_RAT Short transient receptor potential channel 2 OS=Rattus norvegicus GN=Trpc2
GS_019550	CXA3	sp Q64448 CXA3_MOUSE Gap junction alpha-3 protein OS=Mus musculus GN=Gja3
GS_019678	MPDZ	sp Q8VBX6 MPDZ_MOUSE Multiple PDZ domain protein OS=Mus musculus GN=Mpdz
GS_019698	MAP6	sp O73737 MAP6_CHICK Microtubule-associated protein 6 homolog OS=Gallus gallus GN=MAP6
GS_020150	KINH	sp Q2PQA9 KINH_RAT Kinesin-1 heavy chain OS=Rattus norvegicus GN=Kif5b
GS_020318	DESM	sp P23239 DESM_XENLA Desmin OS=Xenopus laevis GN=des
GS_020430	DES	sp Q5XFN2 DESM_CANFA Desmin OS=Canis familiaris GN=DES
GS_020470	TT39B	sp Q28DB0 TT39B_XENTR Tetratricopeptide repeat protein 39B OS=Xenopus tropicalis GN=ttc39b
GS_020687	TMEM130	sp Q8N3G9 TM130_HUMAN Transmembrane protein 130 OS=Homo sapiens GN=TMEM130
GS_020906	BACE1	sp Q1KLR6 BACE1_CAVPO Beta-secretase 1 OS=Cavia porcellus GN=BACE1
GS_020975	TYR	sp P55025 TYRO_ORYLA Tyrosinase OS=Oryzias latipes GN=tyr
GS_021002	PNPH	sp P55859 PNPH_BOVIN Purine nucleoside phosphorylase OS=Bos taurus GN=PNP
GS_021037	IL17REL	sp Q6ZVW7 I17EL_HUMAN Putative interleukin-17 receptor E-like OS=Homo sapiens GN=IL17REL
GS_021046	WNT7B	sp Q3L254 WNT7B_CHICK Protein Wnt-7b OS=Gallus gallus GN=WNT7B
GS_021169	NSG2	sp Q9Y328 NSG2_HUMAN Neuron-specific protein family member 2 OS=Homo sapiens GN=NSG2
GS_021359	PANX3	sp Q8CEG0 PANX3_MOUSE Pannexin-3 OS=Mus musculus GN=Pax3

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