

Top 3 KEGG pathways enriched by micro-TDS-predicted S2 genes

No	KEGG pathway	MiRNA	No. of target genes	Gene name	Gene Ensemble id
1	Morphine addiction (hsa05032)	hsa-miR-147a	10	<i>PDE1C</i>	ENSG00000154678
				<i>CACNA1A</i>	ENSG00000141837
				<i>ADCY2</i>	ENSG00000078295
				<i>GABRG3</i>	ENSG00000182256
				<i>GABBR2</i>	ENSG00000136928
				<i>GABRB3</i>	ENSG00000166206
				<i>KCNJ6</i>	ENSG00000157542
				<i>PRKCB</i>	ENSG00000166501
				<i>GABRB2</i>	ENSG00000145864
				<i>KCNJ3</i>	ENSG00000162989
2	Nicotine addiction (hsa05033)	hsa-miR-147a	7	<i>CACNA1A</i>	ENSG00000141837
				<i>GABRG3</i>	ENSG00000182256
				<i>GABRB3</i>	ENSG00000166206
				<i>GRIA4</i>	ENSG00000152578
				<i>GABRB2</i>	ENSG00000145864
				<i>GRIA3</i>	ENSG00000125675
				<i>GRIN2B</i>	ENSG00000273079
3	Biosynthesis of unsaturated fatty acids (hsa01040)	hsa-miR-3179	1	<i>TECR</i>	ENSG00000099797

Top 3 KEGG pathways enriched by TarBase-predicted S2 genes

No	KEGG pathway	MiRNA	No. of target genes	Gene name	Gene Ensemble id
1	Transcriptional misregulation in cancer (hsa05202)	hsa-miR-3179	8	<i>CCND2</i>	ENSG00000118971
				<i>HOXA9</i>	ENSG00000078399
				<i>HDAC2</i>	ENSG00000196591
				<i>MAX</i>	ENSG00000125952
				<i>KMT2A</i>	ENSG00000118058
				<i>TFE3</i>	ENSG00000068323
				<i>EWSR1</i>	ENSG00000182944
				<i>MDM2</i>	ENSG00000135679

2	Protein processing in endoplasmic reticulum (hsa04141)	hsa-miR-317	12	<i>UBE2E2</i>	ENSG00000182247
				<i>P4HB</i>	ENSG00000185624
				<i>HSPH1</i>	ENSG00000120694
				<i>CANX</i>	ENSG00000127022
				<i>MAN1A2</i>	ENSG00000198162
				<i>GANAB</i>	ENSG00000089597
				<i>PPP1R15A</i>	ENSG00000087074
				<i>HSP90AB1</i>	ENSG00000096384
				<i>SEC24A</i>	ENSG00000113615
				<i>HSP90B1</i>	ENSG00000166598
				<i>SSR4</i>	ENSG00000180879
				<i>UBE2J2</i>	ENSG00000160087
3	Non-small cell lung cancer (hsa05223)	hsa-miR-3179	6	<i>CDK4</i>	ENSG00000135446
				<i>STK4</i>	ENSG00000101109
				<i>RAF1</i>	ENSG00000132155
				<i>AKT2</i>	ENSG00000105221
				<i>AKT1</i>	ENSG00000142208
				<i>BAD</i>	ENSG00000002330

Top 3 KEGG pathways enriched by TargetScan-predicted S2 genes					
No	KEGG pathway	MiRNA	No. of target genes	Gene name	Gene Ensemble id
1	Biosynthesis of unsaturated fatty acids (hsa01040)	hsa-miR-3179	1	<i>TECR</i>	ENSG00000099797
2	Glycerophospholipid metabolism (hsa00564)	hsa-miR-147a	2	<i>GPD1L</i>	ENSG00000152642
				<i>PLA2G16</i>	ENSG00000176485
3	mRNA surveillance pathway (hsa03015)	hsa-miR-3179	5	<i>CPSF4</i>	ENSG00000160917
				<i>PABPC1L2B</i>	ENSG00000184388
				<i>SMG6</i>	ENSG00000070366
				<i>PPP2R2A</i>	ENSG00000221914
				<i>PABPC1L2A</i>	ENSG00000186288