

Top 3 GO-BP terms enriched by TargetScan-predicted S1 genes

No	GO-BP	MiRNA	No. of target genes	Gene name	Gene Ensemble id
1	Extracellular matrix disassembly (GO:0022617)	hsa-miR-29a-3p	20	<i>COL4A5</i>	ENSG00000188153
				<i>ELN</i>	ENSG00000049540
				<i>COL7A1</i>	ENSG00000114270
				<i>COL19A1</i>	ENSG00000082293
				<i>COL3A1</i>	ENSG00000168542
				<i>COL9A1</i>	ENSG00000112280
				<i>MMP16</i>	ENSG00000156103
				<i>COL2A1</i>	ENSG00000139219
				<i>COL15A1</i>	ENSG00000204291
				<i>COL5A1</i>	ENSG00000130635
				<i>COL4A4</i>	ENSG00000081052
				<i>COL1A2</i>	ENSG00000164692
				<i>COL11A1</i>	ENSG00000060718
				<i>COL6A3</i>	ENSG00000163359
				<i>TLL1</i>	ENSG00000038295
				<i>COL8A1</i>	ENSG00000144810
				<i>COL25A1</i>	ENSG00000188517
				<i>COL5A3</i>	ENSG00000080573
				<i>COL5A2</i>	ENSG00000204262
				<i>COL4A1</i>	ENSG00000187498
2	Collagen catabolic process (GO:0030574)	hsa-miR-29a-3p	19	<i>COL4A5</i>	ENSG00000188153
				<i>COL7A1</i>	ENSG00000114270
				<i>COL19A1</i>	ENSG00000082293
				<i>COL3A1</i>	ENSG00000168542
				<i>COL9A1</i>	ENSG00000112280
				<i>ADAMTS2</i>	ENSG00000087116
				<i>MMP16</i>	ENSG00000156103
				<i>COL2A1</i>	ENSG00000139219
				<i>COL15A1</i>	ENSG00000204291
				<i>COL5A1</i>	ENSG00000130635
				<i>COL4A4</i>	ENSG00000081052
				<i>COL1A2</i>	ENSG00000164692
				<i>COL11A1</i>	ENSG00000060718
				<i>COL6A3</i>	ENSG00000163359
				<i>COL8A1</i>	ENSG00000144810

				<i>COL25A1</i>	ENSG00000188517
				<i>COL5A3</i>	ENSG00000080573
				<i>COL5A2</i>	ENSG00000204262
				<i>COL4A1</i>	ENSG00000187498
3	Extracellular matrix organization (GO:0030198)	hsa-miR-29a-3p	28	<i>SPARC</i>	ENSG00000113140
				<i>COL4A5</i>	ENSG00000188153
				<i>ELN</i>	ENSG00000049540
				<i>COL7A1</i>	ENSG00000114270
				<i>COL19A1</i>	ENSG00000082293
				<i>LOX</i>	ENSG00000113083
				<i>COL3A1</i>	ENSG00000168542
				<i>COL9A1</i>	ENSG00000112280
				<i>ADAMTS2</i>	ENSG00000087116
				<i>COL21A1</i>	ENSG00000124749
				<i>MMP16</i>	ENSG00000156103
				<i>COL2A1</i>	ENSG00000139219
				<i>HAS3</i>	ENSG00000103044
				<i>COL15A1</i>	ENSG00000204291
				<i>COL5A1</i>	ENSG00000130635
				<i>COL4A4</i>	ENSG00000081052
				<i>COL1A2</i>	ENSG00000164692
				<i>COL11A1</i>	ENSG00000060718
				<i>COL6A3</i>	ENSG00000163359
				<i>TLL1</i>	ENSG00000038295
				<i>PXDN</i>	ENSG00000130508
				<i>COL8A1</i>	ENSG00000144810
				<i>LAMA2</i>	ENSG00000196569
				<i>MPZL3</i>	ENSG00000160588
				<i>COL25A1</i>	ENSG00000188517
				<i>COL5A3</i>	ENSG00000080573
				<i>COL5A2</i>	ENSG00000204262
				<i>COL4A1</i>	ENSG00000187498

Top 3 GO-MF terms enriched by TargetScan-predicted S1 genes

No	GO-MF	MiRNA	No. of target genes	Gene name	Gene Ensemble id
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1	Extracellular matrix structural constituent (GO:0005201)	hsa-miR-29a-3p	14	<i>COL4A5</i>	ENSG00000188153
				<i>ELN</i>	ENSG00000049540
				<i>COL19A1</i>	ENSG00000082293
				<i>COL3A1</i>	ENSG00000168542
				<i>COL2A1</i>	ENSG00000139219
				<i>COL15A1</i>	ENSG00000204291
				<i>COL5A1</i>	ENSG00000130635
				<i>COL4A4</i>	ENSG00000081052
				<i>COL1A2</i>	ENSG00000164692
				<i>COL11A1</i>	ENSG00000060718
				<i>PXDN</i>	ENSG00000130508
				<i>COL5A3</i>	ENSG00000080573
				<i>COL5A2</i>	ENSG00000204262
				<i>COL4A1</i>	ENSG00000187498
2	Ion binding (GO:0043167)	hsa-miR-29a-3p	85	<i>FREM2</i>	ENSG00000150893
				<i>SPARC</i>	ENSG00000113140
				<i>FERMT2</i>	ENSG00000073712
				<i>SH3PXD2A</i>	ENSG00000107957
				<i>PCDHA10</i>	ENSG00000250120
				<i>ZNF396</i>	ENSG00000186496
				<i>TET1</i>	ENSG00000138336
				<i>PCDHA7</i>	ENSG00000204963
				<i>MEX3B</i>	ENSG00000183496
				<i>PCDHA13</i>	ENSG00000239389
				<i>PCDHA1</i>	ENSG00000204970
				<i>SEC23A</i>	ENSG00000100934
				<i>ZDHHC5</i>	ENSG00000156599
				<i>PAPOLG</i>	ENSG00000115421
				<i>DNMT3B</i>	ENSG00000088305
				<i>SETDB2</i>	ENSG00000136169
				<i>TNFAIP3</i>	ENSG00000118503
				<i>LOX</i>	ENSG00000113083
				<i>ERCC6</i>	ENSG00000225830
				<i>ZKSCAN7</i>	ENSG00000196345
				<i>CLEC7A</i>	ENSG00000172243
				<i>PCDHA11</i>	ENSG00000249158
				<i>COL3A1</i>	ENSG00000168542
				<i>NSD1</i>	ENSG00000165671
				<i>COL9A1</i>	ENSG00000112280
				<i>ADAMTS12</i>	ENSG00000151388

				<i>ADAMTS2</i>	ENSG00000087116
				<i>ZNF207</i>	ENSG00000010244
				<i>MMP16</i>	ENSG000000156103
				<i>AKT2</i>	ENSG000000105221
				<i>TPK1</i>	ENSG000000196511
				<i>PCDHA2</i>	ENSG000000204969
				<i>COL2A1</i>	ENSG000000139219
				<i>MBTD1</i>	ENSG000000011258
				<i>TET3</i>	ENSG000000187605
				<i>NAV2</i>	ENSG000000166833
				<i>ZKSCAN4</i>	ENSG000000187626
				<i>GPC4</i>	ENSG000000076716
				<i>RIT1</i>	ENSG000000143622
				<i>ASXL3</i>	ENSG000000141431
				<i>HMCN1</i>	ENSG000000143341
				<i>LPL</i>	ENSG000000175445
				<i>PCDHAC2</i>	ENSG000000243232
				<i>ARL17A</i>	ENSG000000185829
				<i>COL5A1</i>	ENSG000000130635
				<i>PCDHA12</i>	ENSG000000251664
				<i>ATAD2B</i>	ENSG000000119778
				<i>ZBTB5</i>	ENSG000000168795
				<i>RNF19A</i>	ENSG000000034677
				<i>TRIB2</i>	ENSG000000071575
				<i>CDC42</i>	ENSG000000070831
				<i>CDC7</i>	ENSG000000097046
				<i>AICDA</i>	ENSG000000111732
				<i>COL1A2</i>	ENSG000000164692
				<i>PCDHA5</i>	ENSG000000204965
				<i>KIF26A</i>	ENSG000000066735
				<i>ZNF577</i>	ENSG000000161551
				<i>COL11A1</i>	ENSG000000060718
				<i>TLL1</i>	ENSG000000038295
				<i>ABCB6</i>	ENSG000000115657
				<i>PDIK1L</i>	ENSG000000175087
				<i>PCDHAC1</i>	ENSG000000248383
				<i>RLF</i>	ENSG000000117000
				<i>PXDN</i>	ENSG000000130508
				<i>PCDHA8</i>	ENSG000000204962
				<i>CREG1</i>	ENSG000000143162
				<i>NAV3</i>	ENSG000000067798
				<i>CYCS</i>	ENSG000000172115
				<i>PCDHA4</i>	ENSG000000204967
				<i>COL25A1</i>	ENSG000000188517

				<i>MOB1A</i>	ENSG00000114978
				<i>VEGFA</i>	ENSG00000112715
				<i>PTEN</i>	ENSG00000171862
				<i>XDH</i>	ENSG00000158125
				<i>ADAMTS9</i>	ENSG00000163638
				<i>PCDHA3</i>	ENSG00000255408
				<i>SESTD1</i>	ENSG00000187231
				<i>PCDH15</i>	ENSG00000150275
				<i>ATP10D</i>	ENSG00000145246
				<i>COL5A2</i>	ENSG00000204262
				<i>IREB2</i>	ENSG00000136381
				<i>METAP2</i>	ENSG00000111142
				<i>DGKH</i>	ENSG00000102780
				<i>PCDHA6</i>	ENSG00000081842
				<i>ZNF28</i>	ENSG00000198538

Top 3 GO-CC terms enriched by TargetScan-predicted S1 genes

No	GO-CC	MiRNA	No. of target genes	Gene name	Gene Ensemble id
1	Endoplasmic reticulum lumen (GO:0005788)	hsa-miR-29a-3p	18	<i>COL4A5</i>	ENSG00000188153
				<i>COL7A1</i>	ENSG00000114270
				<i>COL19A1</i>	ENSG00000082293
				<i>COL3A1</i>	ENSG00000168542
				<i>COL9A1</i>	ENSG00000112280
				<i>COL21A1</i>	ENSG00000124749
				<i>COL2A1</i>	ENSG00000139219
				<i>COL15A1</i>	ENSG00000204291
				<i>COL5A1</i>	ENSG00000130635
				<i>COL4A4</i>	ENSG00000081052
				<i>COL1A2</i>	ENSG00000164692
				<i>COL11A1</i>	ENSG00000060718
				<i>COL6A3</i>	ENSG00000163359
				<i>COL8A1</i>	ENSG00000144810
				<i>COL25A1</i>	ENSG00000188517
				<i>COL5A3</i>	ENSG00000080573
				<i>COL5A2</i>	ENSG00000204262
				<i>COL4A1</i>	ENSG00000187498
2	Collagen trimer (GO:0005581)	hsa-miR-29a-3p	16	<i>CIQTNF6</i>	ENSG00000133466
				<i>COL4A5</i>	ENSG00000188153
				<i>COL19A1</i>	ENSG00000082293

				<i>LOX</i>	ENSG00000113083
				<i>COL3A1</i>	ENSG00000168542
				<i>COL21A1</i>	ENSG00000124749
				<i>COL2A1</i>	ENSG00000139219
				<i>COL5A1</i>	ENSG00000130635
				<i>COL4A4</i>	ENSG00000081052
				<i>COL1A2</i>	ENSG00000164692
				<i>COL11A1</i>	ENSG00000060718
				<i>COL6A3</i>	ENSG00000163359
				<i>COL25A1</i>	ENSG00000188517
				<i>COL5A3</i>	ENSG00000080573
				<i>COL5A2</i>	ENSG00000204262
				<i>COL4A1</i>	ENSG00000187498
3	Extracellular matrix (GO:0031012)	hsa-miR-29a-3p	24	<i>COL7A1</i>	ENSG00000114270
				<i>COL3A1</i>	ENSG00000168542
				<i>ADAMTS12</i>	ENSG00000151388
				<i>ADAMTS2</i>	ENSG00000087116
				<i>COL21A1</i>	ENSG00000124749
				<i>MMP16</i>	ENSG00000156103
				<i>COL2A1</i>	ENSG00000139219
				<i>NAV2</i>	ENSG00000166833
				<i>COL15A1</i>	ENSG00000204291
				<i>HMCN1</i>	ENSG00000143341
				<i>LPL</i>	ENSG00000175445
				<i>COL5A1</i>	ENSG00000130635
				<i>COL1A2</i>	ENSG00000164692
				<i>COL11A1</i>	ENSG00000060718
				<i>IL1RL1</i>	ENSG00000115602
				<i>COL6A3</i>	ENSG00000163359
				<i>PXDN</i>	ENSG00000130508
				<i>COL8A1</i>	ENSG00000144810
				<i>LAMA2</i>	ENSG00000196569
				<i>COL5A3</i>	ENSG00000080573
				<i>ADAMTS9</i>	ENSG00000163638
				<i>COL5A2</i>	ENSG00000204262
				<i>COL4A1</i>	ENSG00000187498