

Table s2 List of 108 top scoring miRNA-gene pairs (score \geq 0.50) validated from multiple databases that store miRNA-target gene information

miRNA	Gene	Score	HMDD	mir2 Disease	Target Scan (7.2)	mirTar Base	Microcosm	TarBase (V.8)
hsa-miR-137	EZH2	0.921310025	Y	X	Y	Y	Y	X
hsa-mir-30a-5p	BDNF	0.896386098	X	X	Y	X	X	X
hsa-miR-515-5p	NCAPD2	0.869632574	X	X	Y	X	X	X
hsa-miR-498	C9orf16	0.847708335	X	X	Y	X	X	X
hsa-miR-515-5p	ETV7	0.839177194	X	X	Y	X	X	X
hsa-miR-326	EGFR	0.836344306	Y	X	X	X	X	X
hsa-miR-137	CDK6	0.831422545	X	Y	Y	Y	x	Y
hsa-miR-142-3p	KLF4	0.831239295	X	X	X	X	X	Y
hsa-miR-133b	IDH1	0.814940133	X	X	Y	X	X	X
hsa-miR-380-3p	PIGL	0.816451418	X	X	Y	X	X	X
hsa-mir-329-3p	RNF165	0.813841425	Y	X	Y	X	X	X
hsa-miR-128-3p	SOX11	0.811149147	X	X	Y	Y	X	Y
hsa-miR-429	SOX2	0.802881482	Y	X	Y	Y	X	Y
hsa-miR-512-3p	SORL1	0.7948654	X	X	Y	X	X	X
hsa-miR-425-5p	TANC2	0.789338401	X	X	Y	X	X	X
hsa-miR-206	CCND1	0.778097953	X	X	Y	Y	X	X
hsa-miR-507	STYK1	0.779483426	X	X	Y	X	X	X
hsa-miR-484	MMP17	0.753374054	X	X	Y	X	X	X
hsa-miR-181d	MALT1	0.752769	Y	X	X	Y	X	X
hsa-miR-1	GNA11	0.750595733	X	X	X	X	X	Y
hsa-mir-329-5p	DCUN1D5	0.749397272	X	X	Y	X	X	X
hsa-miR-198	PROX1	0.736641973	Y	X	Y	Y	X	X
hsa-miR-498	KLHL6	0.735231328	X	X	Y	X	X	X
hsa-miR-17-5p	PTEN	0.809074255	Y	X	Y	Y	X	Y
hsa-miR-512-3p	KLF4	0.731772958	X	X	Y	X	X	X
hsa-miR-1	RMND5B	0.730539679	X	X	X	X	X	Y
hsa-miR-30a-5p	KLF4	0.716137477	X	X	X	X	X	Y
hsa-miR-383-3P	PLEKHG4B	0.713098568	X	X	y	X	X	X
has-mir-520b	CCND1	0.712909496	x	x	y	y		
hsa-miR-1	Mef2a	0.712909496	X	Y	X	X	X	Y
hsa-miR-511-5p	CNGA3	0.711884461	X	X	Y	X	X	X
hsa-miR-181d	GAD2	0.709433307	X	X	Y	X	X	X
hsa-miR-1	ZNF484	0.704330739	X	X	Y	X	X	X
hsa-miR-512-3p	HLA-DPA1	0.695920328	X	X	Y	X	X	X
hsa-miR-107	NCAPD2	0.695333909	X	X	X	X	X	Y
hsa-miR-511-3P	PKLR	0.694480055	X	X	Y	X	X	X
hsa-miR-511-3P	TFR2	0.691545274	X	X	Y	X	X	X
hsa-miR-380-5p	ATP7B	0.690157728	X	X	Y	X	X	X
hsa-miR-380-3p	PLEKHG4B	0.688028293	X	X	Y	X	X	X

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hsa-miR-512-3p	ZNF484	0.68710711	X	X	Y	X	X	X
hsa-miR-206	TAOK3	0.683240449	X	X	Y	X	X	X
hsa-miR-206	BDNF	0.590048142	X	X	Y	Y	X	X
hsa-miR-380-3p	FAM24A	0.675393994	X	X	Y	X	X	X
hsa-miR-326	CENPL	0.669372246	X	X	X	X	X	Y
hsa-miR-30a-5p	PPARGC1A	0.667885439	X	X	Y	X	X	Y
hsa-miR-380-3p	LAP3	0.662280248	X	X	Y	X	X	X
hsa-miR-380-3p	BMP3	0.660317602	X	X	Y	X	X	X
hsa-miR-512-3p	GNA11	0.660087467	X	X	Y	X	X	X
hsa-miR-380-5p	KLHL6	0.657802787	X	X	Y	X	X	X
hsa-miR-198	C9orf163	0.654551906	X	X	Y	X	X	X
hsa-miR-326	EIF1	0.652794396	X	X	Y	X	X	X
hsa-miR-511-5P	SLC16A3	0.646373573	X	X	Y	X	X	X
hsa-miR-515-5p	PIGL	0.640086592	X	X	Y	X	X	X
hsa-miR-515-5p	NLRC5	0.624102603	X	X	Y	X	X	X
hsa-miR-380-5p	RAB3C	0.62188293	X	X	Y	X	X	X
hsa-miR-512-3p	NLRC5	0.611479902	X	X	Y	X	X	X
hsa-miR-380-3p	NLRC5	0.609802183	X	X	Y	X	X	X
hsa-miR-181d	TANC2	0.609098106	X	X	Y	X	X	Y
hsa-miR-198	GDPD5	0.608617942	X	X	Y	X	X	X
hsa-miR-1	IRF2	0.607734104	X	X	X	X	X	Y
hsa-miR-498	CUL4B	0.60490017	X	X	Y	X	X	X
hsa-miR-380-3p	CD38	0.603428104	X	X	Y	X	X	X
hsa-miR-346	NUDT13	0.602478571	X	X	Y	X	X	X
hsa-miR-1	HSPA2	0.602193639	X	X	Y	X	X	X
hsa-miR-30e-3p	PKLR	0.601660824	X	X	Y	X	X	X
hsa-miR-512-5p	RAB3C	0.599951053	X	X	Y	X	X	X
hsa-miR-210-3P	BDNF	0.599359912	Y	X	Y	Y	X	Y
hsa-miR-1	ASS1	0.599313879	X	X	X	X	X	Y
hsa-miR-1	TTK	0.598680261	X	X	X	X	X	Y
hsa-miR-210-3p	BDNF	0.598120697	Y	X	Y	Y	X	Y
hsa-miR-498	KRT15	0.59076224	X	X	Y	X	X	X
hsa-miR-30e-3p	BTK	0.58976413	X	X	Y	X	X	X
hsa-miR-515-5p	ABCC12	0.587173323	X	X	Y	X	X	X
hsa-miR-512-5p	PIP5KL1	0.586357874	X	X	Y	X	X	X
hsa-miR-504-5p	TMEM168	0.586117283	X	X	Y	X	X	X
hsa-miR-383-3P	ABCC12	0.585954919	X	X	Y	X	X	X
hsa-miR-1	CXorf56	0.585256089	X	X	Y	X	X	Y
hsa-miR-515-5p	NUP85	0.584918411	X	X	Y	X	X	X

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hsa-miR-184	BCL2	0.537351361	Y	X	X	Y	X	X
hsa-miR-498	ZNF146	0.577215787	X	X	Y	X	X	X
hsa-miR-142-5p	CCND1	0.573554602	X	X	Y	Y	X	Y
hsa-miR-1	RAB3C	0.568073732	X	X	Y	X	X	X
hsa-miR-515-3p	EXOSC7	0.567537902	X	X	Y	X	X	X
hsa-miR-210-3p	C6orf141	0.565115496	X	X	X	X	X	Y
hsa-miR-299-5p	SOX4	0.564485984	X	X	Y	Y	X	X
hsa-miR-383-3p	SORL1	0.563181076	X	X	Y	X	X	X
hsa-miR-511	ADAM23	0.562597714	X	X	Y	X	X	X
hsa-miR-421	CORO1C	0.556805546	X	X	Y	X	X	X
hsa-miR-380-3p	BST1	0.551184938	X	X	Y	X	X	X
hsa-miR-421	PDCD4	0.551174287	X	X	Y	X	X	X
hsa-miR-498	DCUN1D5	0.548687382	X	X	Y	X	X	X
hsa-miR-210-5p	PTCRA	0.542582681	X	X	Y	X	X	X
hsa-miR-210-3p	PAWR	0.537023101	X	X	X	X	X	Y
hsa-miR-383-3p	C6orf141	0.536742575	X	X	Y	X	X	X
hsa-miR-515-3p	SEC14L1	0.534362493	X	X	Y	X	X	X
hsa-miR-133b	HS2ST1	0.530342859	X	X	Y	X	X	X
hsa-miR-383-3P	RAB3C	0.528791307	X	X	Y	X	X	X
hsa-miR-383-3P	DNAH2	0.52872348	X	X	Y	X	X	X
hsa-miR-498	FUS	0.518438229	X	X	Y	X	X	X
hsa-miR-498	CNTNAP4	0.518035856	X	X	Y	X	X	X
hsa-miR-515-5p	MELK	0.516083613	X	X	Y	X	X	X
hsa-miR-210-5p	LTBP4	0.509830094	X	X	Y	X	X	X
hsa-miR-383-3p	DCUN1D5	0.505392346	X	X	Y	X	X	X
hsa-miR-383-3p	UPF3A	0.503940308	X	X	Y	X	X	X
hsa-miR-498	PLEKHG4B	0.503226549	X	X	Y	X	X	X
hsa-miR-515-5p	CENPL	0.50156039	X	X	Y	X	X	X
hsa-miR-384	ASS1	0.500146522	X	X	Y	X	X	X