

## TaqMan® Array Human MicroRNA Cards

These cards are part of a collection of TaqMan® Array Gene Signature Cards that enable analysis of hundreds of TaqMan® Assays on a micro fluidic card with minimal effort.

MicroRNAs (miRNAs) are a class of naturally occurring noncoding RNAs that play a key role in gene regulation. These transcripts are highly conserved single-stranded RNAs (~22 nucleotides) that are cleaved from larger hairpin precursor transcripts. MicroRNAs exert their regulatory effects through the RNA interference (RNAi) machinery by cleaving or, most often, repressing the translation of their messenger RNA (mRNA) targets, and are predicted to regulate at least one third of all human genes [1].

This newly discovered form of posttranscriptional gene regulation has been demonstrated to play important roles in a variety of fundamental cellular processes, including cell proliferation, differentiation, and death [2]. As a result, miRNAs may be directly involved in the development and progression of human diseases, such as cancer, thereby representing an important regulatory mechanism to understand.

Comprehensive coverage of Sanger miRBase v14 is enabled across a two-card set of TaqMan® Array MicroRNA Cards (Cards A and B) for a total of 754 unique assays specific to human miRNAs. In addition, each card contains four control assays—three carefully selected candidate endogenous control assays and one negative control assay. Card A focuses on more highly characterized miRNAs, while Card B contains many of the more recently discovered miRNAs

along with the miR\* sequences. To meet the needs of more focused studies, Cards A and B can be purchased and run separately.

For a convenient and streamlined workflow, each TaqMan® Array MicroRNA Card is used in conjunction with Megaplex™ RT Primers—predefined pools of up to 381 RT primers. Two pools of Megaplex™ RT Primers (Human Pools A and B) are available to complement the assays on the respective cards. Additionally, when assay sensitivity is of the utmost importance, or when sample is limiting, a preamplification step using Megaplex™ PreAmp Primers can be added. The PreAmp Primers significantly enhance the ability to detect low-expressed miRNAs, enabling the generation of a comprehensive expression profile using as little as 1 ng of input total RNA.

Together, these products create the ideal workflow for running hundreds of TaqMan® MicroRNA Assays in as little as five hours, and are the perfect solution for miRNA profiling applications. Combined with the data quality advantages of TaqMan® MicroRNA Assays—unsurpassed sensitivity, high specificity, and wide dynamic range—this product combination provides significant advantages over microarrays.

### References

1. Zamore PD, Haley B (2005) Ribo-gnome: the big world of small RNAs. *Science* 309:1519–1524.
2. Miska EA (2005) How microRNAs control cell division, differentiation and death. *Curr Opin Genet Dev* 15:563–568.

### TaqMan® Array Gene Signature Cards

Gene Signature Card Name	# of miRNA Targets/Controls	Format	# of Cards	Part Number
Human Array MicroRNA Card				
Human Card A v2	377/4	Format 384	4 cards	4398965
Human Card B v3	377/4	Format 384	4 cards	4444910
Human A + B Card Set v3	754/4	Format 384	8 cards	4444913

### Associated Products

Reagents	Part Number
Megaplex™ RT for TaqMan® MicroRNA Assays	
<ul style="list-style-type: none"> <li>Megaplex™ RT Primers               <ul style="list-style-type: none"> <li>Human Pool A</li> <li>Human Pool B</li> </ul> </li> <li>Megaplex™ PreAmp Primers               <ul style="list-style-type: none"> <li>Human Pool A</li> <li>Human Pool B</li> </ul> </li> </ul>	Multiple†
TaqMan® MicroRNA Reverse Transcription Kit, 200 reactions	4366596
TaqMan® 2X Universal Master Mix II, No UNG, 1 x 5 mL	4440040

† Visit [mirna.appliedbiosystems.com](http://mirna.appliedbiosystems.com) for product information.

## TaqMan® Array Human MicroRNA Card A v2

A	hsa-let-7a	hsa-let-7c	hsa-let-7d	hsa-let-7e	hsa-let-7f	hsa-let-7g	hsa-miR-1	hsa-miR-9	hsa-miR-10a	hsa-miR-10b	U6 snRNA	U6 snRNA	hsa-miR-15a	hsa-miR-15b	hsa-miR-16	hsa-miR-17	hsa-miR-18a	hsa-miR-18b	hsa-miR-19a	hsa-miR-19b	hsa-miR-20a	hsa-miR-20b	hsa-miR-21	hsa-miR-22	1
B	hsa-miR-23a	hsa-miR-23b	hsa-miR-24	hsa-miR-25	hsa-miR-26a	hsa-miR-26b	hsa-miR-27a	hsa-miR-27b	hsa-miR-28-3p	hsa-miR-28-5p	U6 snRNA	U6 snRNA	hsa-miR-29a	hsa-miR-29b	hsa-miR-29c	hsa-miR-30b	hsa-miR-30c	hsa-miR-31	hsa-miR-32	hsa-miR-33b	hsa-miR-34a	hsa-miR-34c-5p	hsa-miR-92a	hsa-miR-93	
C	hsa-miR-95	hsa-miR-96	hsa-miR-98	hsa-miR-99a	hsa-miR-99b	hsa-miR-100	hsa-miR-101	hsa-miR-103	hsa-miR-105	hsa-miR-106a	RNU44	hsa-miR-106b	hsa-miR-107	hsa-miR-122	hsa-miR-124	hsa-miR-125b-3p	hsa-miR-125a-5p	hsa-miR-125b-5p	hsa-miR-126	hsa-miR-127-3p	hsa-miR-127-5p	hsa-miR-128	hsa-miR-129-3p	hsa-miR-129-5p	2
D	hsa-miR-130a	hsa-miR-130b	hsa-miR-132	hsa-miR-133a	hsa-miR-133b	hsa-miR-134	hsa-miR-135a	hsa-miR-135b	hsa-miR-136	hsa-miR-137	hsa-miR-138	hsa-miR-139-3p	hsa-miR-139-5p	hsa-miR-140-3p	hsa-miR-140-5p	hsa-miR-141	hsa-miR-142-3p	hsa-miR-142-5p	hsa-miR-143	hsa-miR-145	hsa-miR-146a	hsa-miR-146b-3p	hsa-miR-146b-5p	hsa-miR-147b	
E	hsa-miR-148a	hsa-miR-148b	hsa-miR-149	hsa-miR-150	hsa-miR-152	hsa-miR-153	hsa-miR-154	hsa-miR-181a	hsa-miR-181c	hsa-miR-182	RNU48	hsa-miR-183	hsa-miR-184	hsa-miR-185	hsa-miR-186	hsa-miR-187	hsa-miR-188-3p	hsa-miR-188-5p	hsa-miR-190	hsa-miR-191	hsa-miR-192	hsa-miR-193a-3p	hsa-miR-193b-5p	hsa-miR-194	3
F	hsa-miR-195	hsa-miR-196b	hsa-miR-197	hsa-miR-198	hsa-miR-199a-5p	hsa-miR-199a-3p	hsa-miR-199b-5p	hsa-miR-200a	hsa-miR-200b	hsa-miR-200c	hsa-miR-202	hsa-miR-203	hsa-miR-204	hsa-miR-205	hsa-miR-208b	hsa-miR-210	hsa-miR-214	hsa-miR-215	hsa-miR-216a	hsa-miR-216b	hsa-miR-217	hsa-miR-218	hsa-miR-219-5p	hsa-miR-221	
G	hsa-miR-222	hsa-miR-223	hsa-miR-224	hsa-miR-296-3p	hsa-miR-296-5p	hsa-miR-299-3p	hsa-miR-299-5p	hsa-miR-301a	hsa-miR-301b	hsa-miR-302a	ath-miR-159a	hsa-miR-302b	hsa-miR-302c	hsa-miR-320	hsa-miR-323-3p	hsa-miR-324-3p	hsa-miR-324-5p	hsa-miR-326	hsa-miR-328	hsa-miR-329	hsa-miR-330-3p	hsa-miR-330-5p	hsa-miR-331-3p	hsa-miR-331-5p	4
H	hsa-miR-335	hsa-miR-337-5p	hsa-miR-338-3p	hsa-miR-339-3p	hsa-miR-339-5p	hsa-miR-340	hsa-miR-342-3p	hsa-miR-342-5p	hsa-miR-345	hsa-miR-361-5p	hsa-miR-362-3p	hsa-miR-362-5p	hsa-miR-363	hsa-miR-365	hsa-miR-367	hsa-miR-369-3p	hsa-miR-369-5p	hsa-miR-370	hsa-miR-371-3p	hsa-miR-372	hsa-miR-373	hsa-miR-374a	hsa-miR-374b	hsa-miR-375	
I	hsa-miR-374b	hsa-miR-375	hsa-miR-376a	hsa-miR-376b	hsa-miR-377	hsa-miR-379	hsa-miR-380	hsa-miR-381	hsa-miR-382	hsa-miR-383	hsa-miR-409-5p	hsa-miR-410	hsa-miR-411	hsa-miR-422a	hsa-miR-423-5p	hsa-miR-424	hsa-miR-425	hsa-miR-429	hsa-miR-431	hsa-miR-433	hsa-miR-449a	hsa-miR-449b	hsa-miR-450a	hsa-miR-450b-3p	5
J	hsa-miR-450b-5p	hsa-miR-451	hsa-miR-452	hsa-miR-453	hsa-miR-454	hsa-miR-455-3p	hsa-miR-455-5p	hsa-miR-483-5p	hsa-miR-484	hsa-miR-485-3p	hsa-miR-485-5p	hsa-miR-486-3p	hsa-miR-486-5p	hsa-miR-487a	hsa-miR-487b	hsa-miR-488	hsa-miR-489	hsa-miR-490-3p	hsa-miR-491-3p	hsa-miR-491-5p	hsa-miR-493	hsa-miR-494	hsa-miR-495	hsa-miR-496	
K	hsa-miR-499-3p	hsa-miR-499-5p	hsa-miR-500	hsa-miR-501-3p	hsa-miR-501-5p	hsa-miR-502-3p	hsa-miR-502-5p	hsa-miR-503	hsa-miR-504	hsa-miR-505	hsa-miR-507	hsa-miR-508-3p	hsa-miR-508-5p	hsa-miR-509-5p	hsa-miR-510	hsa-miR-512-3p	hsa-miR-512-5p	hsa-miR-513-5p	hsa-miR-515-3p	hsa-miR-515-5p	hsa-miR-516a-5p	hsa-miR-516b	hsa-miR-517a	hsa-miR-517c	6
L	hsa-miR-518a-3p	hsa-miR-518a-5p	hsa-miR-518b	hsa-miR-518c	hsa-miR-518d-5p	hsa-miR-518e	hsa-miR-518f	hsa-miR-519a	hsa-miR-519d	hsa-miR-519e	hsa-miR-520a-3p	hsa-miR-520a-5p	hsa-miR-520b-5p	hsa-miR-520g	hsa-miR-521	hsa-miR-522	hsa-miR-523	hsa-miR-524-5p	hsa-miR-525-3p	hsa-miR-525-5p	hsa-miR-526b	hsa-miR-523-3p	hsa-miR-523-5p	hsa-miR-525p	
M	hsa-miR-539	hsa-miR-541	hsa-miR-542-3p	hsa-miR-542-5p	hsa-miR-544	hsa-miR-545	hsa-miR-548a-3p	hsa-miR-548a-5p	hsa-miR-548b-3p	hsa-miR-548b-5p	hsa-miR-548c-3p	hsa-miR-548c-5p	hsa-miR-548d-3p	hsa-miR-548d-5p	hsa-miR-551b	hsa-miR-556-3p	hsa-miR-556-5p	hsa-miR-561	hsa-miR-570	hsa-miR-574-3p	hsa-miR-576-3p	hsa-miR-576-5p	hsa-miR-579	hsa-miR-582-3p	7
N	hsa-miR-582-5p	hsa-miR-589	hsa-miR-590-5p	hsa-miR-597	hsa-miR-598	hsa-miR-615-3p	hsa-miR-615-5p	hsa-miR-616	hsa-miR-618	hsa-miR-624	hsa-miR-625	hsa-miR-627	hsa-miR-628-5p	hsa-miR-629	hsa-miR-636	hsa-miR-642	hsa-miR-651	hsa-miR-652	hsa-miR-653	hsa-miR-654-3p	hsa-miR-654-5p	hsa-miR-655	hsa-miR-660	hsa-miR-671-3p	
O	hsa-miR-672	hsa-miR-674	hsa-miR-708	hsa-miR-744	hsa-miR-758	hsa-miR-871	hsa-miR-872	hsa-miR-873	hsa-miR-874	hsa-miR-875-3p	hsa-miR-876-3p	hsa-miR-876-5p	hsa-miR-885-3p	hsa-miR-885-5p	hsa-miR-886-3p	hsa-miR-886-5p	hsa-miR-887	hsa-miR-888	hsa-miR-889	hsa-miR-890	hsa-miR-891a	hsa-miR-891b	hsa-miR-892a	hsa-miR-147	8
P	hsa-miR-208	hsa-miR-211	hsa-miR-212	hsa-miR-219-1-3p	hsa-miR-219-1-5p	hsa-miR-220	hsa-miR-220b	hsa-miR-220c	hsa-miR-298	hsa-miR-325	hsa-miR-346	hsa-miR-376c	hsa-miR-384	hsa-miR-412	hsa-miR-448	hsa-miR-482	hsa-miR-506	hsa-miR-509-3-5p	hsa-miR-511	hsa-miR-517b	hsa-miR-519c-3p	hsa-miR-520b	hsa-miR-520c	hsa-miR-520f	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Port

## TaqMan® Array Human MicroRNA Card B v3

A	dme-miR-7	hsa-miR-548f	hsa-miR-30a-3p	hsa-miR-30a-5p	hsa-miR-30d	hsa-miR-30e-3p	hsa-miR-34b	hsa-miR-126*	hsa-miR-154*	hsa-miR-182*	U6 snRNA	U6 snRNA	hsa-miR-206	hsa-miR-213	hsa-miR-302c*	hsa-miR-302d	hsa-miR-378	hsa-miR-380-5p	hsa-miR-1257	hsa-miR-200a*	hsa-miR-432	hsa-miR-497	hsa-miR-500	1	
B	hsa-miR-1238	hsa-miR-488	hsa-miR-517*	hsa-miR-516-3p	hsa-miR-516c*	hsa-miR-519a*	hsa-miR-520h	hsa-miR-524	hsa-miR-7d*	hsa-miR-363*	U6 snRNA	U6 snRNA	hsa-miR-7*	hsa-miR-656	hsa-miR-549	hsa-miR-657	hsa-miR-658	hsa-miR-659	hsa-miR-551a	hsa-miR-552	hsa-miR-553	hsa-miR-554	hsa-miR-555		hsa-miR-557
C	hsa-miR-558	hsa-miR-559	hsa-miR-562	hsa-miR-563	hsa-miR-564	hsa-miR-566	hsa-miR-567	hsa-miR-569	hsa-miR-586	hsa-miR-587	RNU44	hsa-miR-588	hsa-miR-589	hsa-miR-550	hsa-miR-591	hsa-miR-592	hsa-miR-593	hsa-miR-596	hsa-miR-622	hsa-miR-599	hsa-miR-623	hsa-miR-600	hsa-miR-624	hsa-miR-601	2
D	hsa-miR-626	hsa-miR-629	hsa-miR-630	hsa-miR-631	hsa-miR-603	hsa-miR-604	hsa-miR-605	hsa-miR-606	hsa-miR-607	hsa-miR-608	hsa-miR-609	hsa-miR-633	hsa-miR-634	hsa-miR-635	hsa-miR-637	hsa-miR-638	hsa-miR-639	hsa-miR-640	hsa-miR-641	hsa-miR-613	hsa-miR-614	hsa-miR-616	hsa-miR-617	hsa-miR-643	
E	hsa-miR-644	hsa-miR-645	hsa-miR-621	hsa-miR-646	hsa-miR-647	hsa-miR-648	hsa-miR-649	hsa-miR-650	hsa-miR-661	hsa-miR-662	RNU48	hsa-miR-571	hsa-miR-572	hsa-miR-573	hsa-miR-575	hsa-miR-578	hsa-miR-580	hsa-miR-591	hsa-miR-593	hsa-miR-594	hsa-miR-595	hsa-miR-596	hsa-miR-597	hsa-miR-598	3
F	hsa-miR-668	hsa-miR-767-5p	hsa-miR-767-3p	hsa-miR-454*	hsa-miR-769-5p	hsa-miR-770-5p	hsa-miR-769-3p	hsa-miR-802	hsa-miR-675	hsa-miR-505*	hsa-miR-221*	hsa-miR-222*	hsa-miR-223*	hsa-miR-186*	hsa-miR-186*	hsa-miR-34b	hsa-miR-185*	hsa-miR-185*	hsa-miR-195*	hsa-miR-30c-1*	hsa-miR-30c-2*	hsa-miR-32*	hsa-miR-31*	hsa-miR-130b*	
G	hsa-miR-28a-2*	hsa-miR-361-3p	hsa-let-7g*	hsa-miR-302d*	hsa-miR-302d*	hsa-miR-367*	hsa-miR-374a*	hsa-miR-23b*	hsa-miR-376a*	hsa-miR-377*	159a	hsa-miR-30b*	hsa-miR-122*	hsa-miR-130a*	hsa-miR-132*	hsa-miR-148a*	hsa-miR-33a	hsa-miR-33a*	hsa-miR-92a-1*	hsa-miR-92a-2*	hsa-miR-93*	hsa-miR-96*	hsa-miR-99a*	hsa-miR-100*	4
H	hsa-miR-101*	hsa-miR-138-2*	hsa-miR-141*	hsa-miR-143*	hsa-miR-144*	hsa-miR-145*	hsa-miR-920	hsa-miR-921	hsa-miR-922	hsa-miR-924	hsa-miR-337-3p	hsa-miR-125b-2*	hsa-miR-135b*	hsa-miR-148b*	hsa-miR-146a*	hsa-miR-149*	hsa-miR-29b-1*	hsa-miR-29b-2*	hsa-miR-105*	hsa-miR-106a*	hsa-miR-16-2*	hsa-let-7f*	hsa-miR-15b*	hsa-miR-27b*	
I	hsa-miR-933	hsa-miR-934	hsa-miR-935	hsa-miR-936	hsa-miR-937	hsa-miR-938	hsa-miR-939	hsa-miR-941	hsa-miR-935*	hsa-miR-942	hsa-miR-943	hsa-miR-944	hsa-miR-99b*	hsa-miR-124*	hsa-miR-541*	hsa-miR-875-5p	hsa-miR-888*	hsa-miR-892b	hsa-miR-9*	hsa-miR-411*	hsa-miR-378	hsa-miR-151-3p	hsa-miR-340*	hsa-miR-190b*	5
J	hsa-miR-545*	hsa-miR-183*	hsa-miR-192*	hsa-miR-200b*	hsa-miR-200c*	hsa-miR-155*	hsa-miR-10a*	hsa-miR-214*	hsa-miR-218-2*	hsa-miR-129*	hsa-miR-22*	hsa-miR-425*	hsa-miR-30d*	hsa-let-7a*	hsa-miR-424*	hsa-miR-186*	hsa-miR-20b*	hsa-miR-431*	hsa-miR-7-2*	hsa-miR-100*	hsa-miR-34a*	hsa-miR-181a-2*	hsa-miR-744*	hsa-miR-452*	
K	hsa-miR-409-3p	hsa-miR-181c*	hsa-miR-196a*	hsa-miR-483-3p	hsa-miR-708*	hsa-miR-92b*	hsa-miR-551b*	hsa-miR-202*	hsa-miR-193b*	hsa-miR-497*	hsa-miR-518a*	hsa-miR-543	hsa-miR-125b-1*	hsa-miR-194*	hsa-miR-106b*	hsa-miR-302a*	hsa-miR-519b-3p	hsa-miR-518f*	hsa-miR-374b*	hsa-miR-520c-3p	hsa-let-7c*	hsa-let-7e*	hsa-let-7f*	hsa-miR-550	6
L	hsa-miR-593	hsa-let-7f1*	hsa-let-7f2*	hsa-miR-15a*	hsa-miR-161*	hsa-miR-17*	hsa-miR-18a*	hsa-miR-19a*	hsa-miR-119-1*	hsa-miR-425*	hsa-miR-629-3p	hsa-miR-206*	hsa-miR-21*	hsa-miR-23a*	hsa-miR-24-1*	hsa-miR-25*	hsa-miR-26a-1*	hsa-miR-26b*	hsa-miR-27a*	hsa-miR-28a*	hsa-miR-151-5p	hsa-miR-785	hsa-miR-339-5p	hsa-miR-339-3p	
M	hsa-miR-620	hsa-miR-577	hsa-miR-144	hsa-miR-590-3p	hsa-miR-191*	hsa-miR-665	hsa-miR-520D-3P	hsa-miR-1224-3P	hsa-miR-1305	hsa-miR-513C	hsa-miR-513B	hsa-miR-1226*	hsa-miR-1236	hsa-miR-1228*	hsa-miR-1225-3P	hsa-miR-1233	hsa-miR-1227	hsa-miR-1286	hsa-miR-548M	hsa-miR-1179	hsa-miR-1178	hsa-miR-1205	hsa-miR-1271	hsa-miR-1201	7
N	hsa-miR-548J	hsa-miR-1263	hsa-miR-1294	hsa-miR-1269	hsa-miR-1265	hsa-miR-1244	hsa-miR-1303	hsa-miR-1259	hsa-miR-548P	hsa-miR-1264	hsa-miR-1255B	hsa-miR-1282	hsa-miR-1255A	hsa-miR-1270	hsa-miR-1197	hsa-miR-1324	hsa-miR-548H	hsa-miR-1254	hsa-miR-548K	hsa-miR-1251	hsa-miR-1285	hsa-miR-1245	hsa-miR-1292	hsa-miR-1301	
O	hsa-miR-1200	hsa-miR-1182	hsa-miR-1288	hsa-miR-1291	hsa-miR-1275	hsa-miR-1183	hsa-miR-1184	hsa-miR-1276	hsa-miR-320B																