

TaqMan® Human MicroRNA Arrays

These arrays are part of a collection of TaqMan® Gene Signature Arrays 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 genes¹.

This newly discovered form of post-transcriptional gene regulation has been demonstrated to play important roles in a variety of fundamental cellular processes including cell proliferation, differentiation and death². 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 v10 is enabled across a two-card set of TaqMan® MicroRNA Arrays (Arrays A and B) for a total of 667 unique assays specific to human miRNAs. In addition, each array contains four control assays—three carefully selected candidate endogenous control assays and one negative control assay. Array A focuses on more highly characterized

miRNAs, while Array B contains many of the more recently discovered miRNAs along with the miR* sequences. To meet the needs of more focused studies, Arrays A and B can be purchased and run separately.

For a convenient and streamlined workflow, each TaqMan MicroRNA Array is used in conjunction with Megaplex™ RT Primers—pre-defined 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 arrays. 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 1ng 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 provides significant advantages over microarrays.

References:

1. Zamore, P.D. and Haley, B. 2005. *Science* 39:1519–1524.
2. Miska, E.A. 2005. *Curr Opin Genet Dev* 15:563–568.

TaqMan® Gene Signature Arrays

Gene Signature Array Name	# of miRNA Targets/Controls	Format	# of Arrays	Part Number
Human MicroRNA Array v2.0				
Human Array A	377/4	Format 384	4 arrays	4398965
Human Array B	290/4	Format 384	4 arrays	4398966
Human Array A and B	667/4	Format 384	8 arrays	4400238

Associated Products

Reagents	Part Number
Megaplex™ RT for TaqMan® MicroRNA Assays	
<ul style="list-style-type: none"> Megaplex™ RT Primers <ul style="list-style-type: none"> Human Pool A Human Pool B Megaplex™ PreAmp Primers <ul style="list-style-type: none"> Human Pool A Human Pool B 	Multiple ‡
TaqMan® MicroRNA Reverse Transcription Kit	
200 reactions	4366596
1,000 reactions	4366597
TaqMan® 2X Universal PCR Master Mix, No AmpErase® UNG	4324018

‡ Visit mirna.appliedbiosystems.com for product information.

TaqMan® Human MicroRNA Array A

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	Mamm U6	Mamm U6	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-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	Mamm U6	Mamm U6	hsa-miR-106b	hsa-miR-107	hsa-miR-122	hsa-miR-124	hsa-miR-125a-3p	hsa-miR-125a-5p	hsa-miR-125b-3p	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			
C	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	hsa-miR-148b	hsa-miR-149	3			
D	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-193a-5p	hsa-miR-193b	hsa-miR-194	hsa-miR-195	hsa-miR-196b	4		
E	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-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	hsa-miR-222	hsa-miR-223	hsa-miR-224	hsa-miR-225	5		
F	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	hsa-miR-335	hsa-miR-337-5p	hsa-miR-338-3p	6		
G	hsa-miR-335	hsa-miR-337-5p	hsa-miR-338-3p	hsa-miR-339-3p	hsa-miR-340	hsa-miR-340	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-370	hsa-miR-371-3p	hsa-miR-372	hsa-miR-373	hsa-miR-374a	hsa-miR-374b	hsa-miR-375	hsa-miR-376a	hsa-miR-376b	hsa-miR-377	7		
H	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	hsa-miR-450b-5p	hsa-miR-451	hsa-miR-452	8		
I	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	hsa-miR-499-3p	hsa-miR-499-5p	hsa-miR-500-5p	9		
J	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-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	hsa-miR-518a-3p	hsa-miR-518a-5p	hsa-miR-518b	hsa-miR-518c	hsa-miR-518d-3p	10	
K	hsa-miR-518a-5p	hsa-miR-518a-5p	hsa-miR-518b	hsa-miR-518c	hsa-miR-518d-3p	hsa-miR-518d-5p	hsa-miR-518e	hsa-miR-518f	hsa-miR-519a	hsa-miR-519b	hsa-miR-519c	hsa-miR-519d	hsa-miR-519e	hsa-miR-520a-3p	hsa-miR-520a-5p	hsa-miR-520d-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-527-3p	hsa-miR-527-5p	hsa-miR-528-3p	hsa-miR-528-5p	11	
L	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-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	hsa-miR-582-5p	hsa-miR-589	hsa-miR-590	12	
M	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-661-3p	hsa-miR-661-5p	hsa-miR-672	hsa-miR-674	hsa-miR-674	13	
N	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-898	hsa-miR-899	hsa-miR-900	hsa-miR-901a	hsa-miR-901b	hsa-miR-902a	hsa-miR-902b	hsa-miR-903	hsa-miR-904	hsa-miR-905	hsa-miR-906	hsa-miR-907	hsa-miR-908	14
O	hsa-miR-904	hsa-miR-905	hsa-miR-906	hsa-miR-907	hsa-miR-908	hsa-miR-909	hsa-miR-910	hsa-miR-911	hsa-miR-912	hsa-miR-913	hsa-miR-914	hsa-miR-915	hsa-miR-916	hsa-miR-917	hsa-miR-918	hsa-miR-919	hsa-miR-920	hsa-miR-921	hsa-miR-922	hsa-miR-923	hsa-miR-924	hsa-miR-925	hsa-miR-926	hsa-miR-927	hsa-miR-928	hsa-miR-929	hsa-miR-930	hsa-miR-931	hsa-miR-932	15
P	hsa-miR-929	hsa-miR-930	hsa-miR-931	hsa-miR-932	hsa-miR-933	hsa-miR-934	hsa-miR-935	hsa-miR-936	hsa-miR-937	hsa-miR-938	hsa-miR-939	hsa-miR-940	hsa-miR-941	hsa-miR-942	hsa-miR-943	hsa-miR-944	hsa-miR-945	hsa-miR-946	hsa-miR-947	hsa-miR-948	hsa-miR-949	hsa-miR-950	hsa-miR-951	hsa-miR-952	hsa-miR-953	hsa-miR-954	hsa-miR-955	hsa-miR-956	hsa-miR-957	16

TaqMan® Human MicroRNA Array B

A	hsa-miR-30a*	hsa-miR-30e*	hsa-miR-34b*	hsa-miR-126*	hsa-miR-154*	hsa-miR-182*	hsa-miR-181a*	hsa-miR-302c*	hsa-miR-373*	hsa-miR-378*	Mamm U6	Mamm U6	hsa-miR-380*	hsa-miR-200a*	hsa-miR-432*	hsa-miR-493*	hsa-miR-500*	hsa-miR-488*	hsa-miR-517*	hsa-miR-518c*	hsa-miR-519a*	hsa-let-7d*	hsa-miR-363*	hsa-miR-7e*	1	
B	hsa-miR-589*	hsa-miR-550*	hsa-miR-593*	hsa-miR-624*	hsa-miR-629*	hsa-miR-616*	hsa-miR-29c*	hsa-miR-454*	hsa-miR-505*	hsa-miR-221*	Mamm U6	Mamm U6	hsa-miR-222*	hsa-miR-223*	hsa-miR-136*	hsa-miR-185*	hsa-miR-186*	hsa-miR-195*	hsa-miR-30c-1*	hsa-miR-30c-2*	hsa-miR-32*	hsa-miR-130b*	hsa-miR-26a-2*	hsa-miR-7f*	2	
C	hsa-miR-302b*	hsa-miR-302d*	hsa-miR-367*	hsa-miR-374a*	hsa-miR-23b*	hsa-miR-376a*	hsa-miR-377*	hsa-miR-30b*	hsa-miR-122*	hsa-miR-130a*	RNU48	RNU48	hsa-miR-132*	hsa-miR-379*	hsa-miR-148a*	hsa-miR-33a*	hsa-miR-92a-1*	hsa-miR-92a-2*	hsa-miR-93*	hsa-miR-96*	hsa-miR-99a*	hsa-miR-100*	hsa-miR-101*	hsa-miR-138-2*	3	
D	hsa-miR-141*	hsa-miR-143*	hsa-miR-144*	hsa-miR-145*	hsa-miR-125b-2*	hsa-miR-135b*	hsa-miR-148b*	hsa-miR-138-1*	hsa-miR-148a*	hsa-miR-149*	RNU48	RNU48	hsa-miR-290-1*	hsa-miR-29b-2*	hsa-miR-105*	hsa-miR-106a*	hsa-miR-16-2*	hsa-let-7i*	hsa-miR-15b*	hsa-miR-27b*	hsa-let-7a*	hsa-miR-335*	hsa-miR-99b*	hsa-miR-124*	hsa-miR-541*	4
E	hsa-miR-888*	hsa-miR-9*	hsa-miR-135a*	hsa-miR-411*	hsa-miR-340*	hsa-miR-545*	hsa-miR-183*	hsa-miR-192*	hsa-miR-200b*	hsa-miR-200c*	RNU44	RNU44	hsa-miR-155*	hsa-miR-10a*	hsa-miR-214*	hsa-miR-218-2*	hsa-miR-22*	hsa-miR-425*	hsa-miR-304*	hsa-let-7a*	hsa-miR-424*	hsa-miR-18b*	hsa-miR-20b*	hsa-miR-431*	5	
F	hsa-miR-7f-2*	hsa-miR-10b*	hsa-miR-34a*	hsa-miR-181a-2*	hsa-miR-744*	hsa-miR-452*	hsa-miR-181c*	hsa-miR-708*	hsa-miR-92b*	hsa-miR-551b*	RNU44	RNU44	hsa-miR-202*	hsa-miR-193b*	hsa-miR-497*	hsa-miR-518*	hsa-miR-125b-1*	hsa-miR-194*	hsa-miR-106b*	hsa-miR-302a*	hsa-let-7a*	hsa-miR-526b*	hsa-miR-518f*	hsa-miR-944	hsa-miR-943	6
G	hsa-let-7e*	hsa-let-7f-1*	hsa-let-7f-2*	hsa-miR-15a*	hsa-miR-16-1*	hsa-miR-17*	hsa-miR-18a*	hsa-miR-19a*	hsa-miR-19b-1*	hsa-miR-19b-2*	RNU24	RNU24	hsa-miR-625*	hsa-miR-20a*	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-29a*	hsa-miR-944	hsa-miR-943	7	
H	hsa-miR-942	hsa-miR-941	hsa-miR-939	hsa-miR-938	hsa-miR-937	hsa-miR-936	hsa-miR-932b	hsa-miR-937	hsa-miR-875-5p	hsa-miR-770-5p	RNU24	RNU24	hsa-miR-760	hsa-miR-661	hsa-miR-659	hsa-miR-843	hsa-miR-638	hsa-miR-632	hsa-miR-630	hsa-miR-619	hsa-miR-617	hsa-miR-612	hsa-miR-610	hsa-miR-603	8	
I	hsa-miR-601	hsa-miR-595	hsa-miR-593	hsa-miR-592	hsa-miR-587	hsa-miR-586	hsa-miR-585	hsa-miR-583	hsa-miR-575	hsa-miR-573	RNU43	RNU43	hsa-miR-606B	hsa-miR-569	hsa-miR-567	hsa-miR-565	hsa-miR-564	hsa-miR-563	hsa-miR-558	hsa-miR-557	hsa-miR-555	hsa-miR-554	hsa-miR-553	hsa-miR-552	9	
J	hsa-miR-552	hsa-miR-551a	hsa-miR-550	hsa-miR-549	hsa-miR-543	hsa-miR-520b	hsa-miR-520c-3p	hsa-miR-516a-3p	hsa-miR-513-3p	hsa-miR-509-3p	RNU43	RNU43	hsa-miR-606B	hsa-miR-159a	hsa-miR-498	hsa-miR-378	hsa-miR-337-3p	hsa-miR-30e	hsa-miR-30a	hsa-miR-206	hsa-miR-190b	hsa-miR-188-5p	hsa-miR-151-3p	hsa-miR-649	hsa-miR-649	10
K	hsa-miR-935	hsa-miR-934	hsa-miR-933	hsa-miR-924	hsa-miR-923	hsa-miR-922	hsa-miR-921	hsa-miR-920	hsa-miR-901	hsa-miR-769-5p	hsa-miR-768-3p	hsa-miR-768-5p	hsa-miR-767-3p	hsa-miR-767-5p	hsa-miR-766	hsa-miR-7	hsa-miR-675	hsa-miR-668	hsa-miR-662	hsa-miR-658	hsa-miR-657	hsa-miR-656	hsa-miR-650	hsa-miR-649	hsa-miR-649	11
L	hsa-miR-935	hsa-miR-934	hsa-miR-933	hsa-miR-924	hsa-miR-923	hsa-miR-922	hsa-miR-921	hsa-miR-920	hsa-miR-901	hsa-miR-769-5p	hsa-miR-768-3p	hsa-miR-768-5p	hsa-miR-767-3p	hsa-miR-767-5p	hsa-miR-766	hsa-miR-7	hsa-miR-675	hsa-miR-668	hsa-miR-662	hsa-miR-658	hsa-miR-657	hsa-miR-656	hsa-miR-650	hsa-miR-649	hsa-miR-649	12
M	hsa-miR-648	hsa-miR-647	hsa-miR-646	hsa-miR-645	hsa-miR-644	hsa-miR-641	hsa-miR-640	hsa-miR-639	hsa-miR-637	hsa-miR-635	hsa-miR-634	hsa-miR-633	hsa-miR-631	hsa-miR-628-3p	hsa-miR-626	hsa-miR-623	hsa-miR-621	hsa-miR-614								