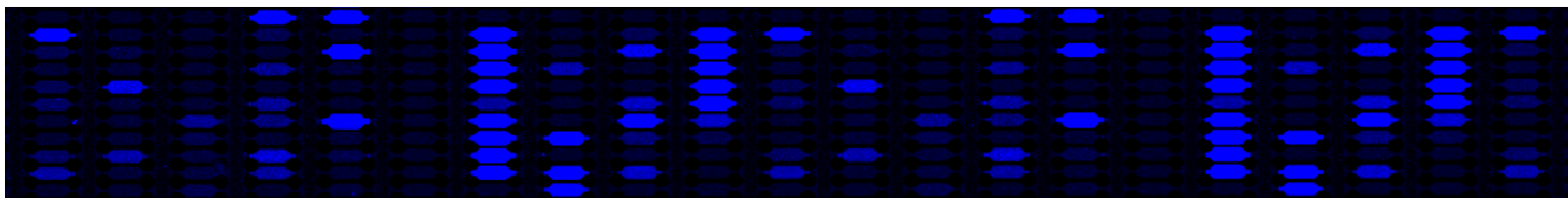


# Standard Data Analysis Report

## miRNA Microarray Service

Experiment: S50188  
Date: 2005-10-20  
Prepared for: Dr. Sample  
LC Sciences



Prepared by  
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## I. Data List

### Chip 1

<b>Data Files</b> Folder Name Data File Layout File Original Image File Processed Cy3 File Processed Cy5 File	Chip1_H7.1_050538 H7.1_050538-1018-w53c20-450-485_Data.xls Layout_Human_V7.1C_051017.xls H7.1_050538-1018-w53c20-450-485.tif H7.1_050538-1018-w53c20-450Cy3.tif H7.1_050538-1018-w53c20-485Cy5.tif
<b>Assay Information</b> Date of Assay Chip ID Sample source  Channel I Sample ID Sample Receiving Date  Channel II Sample ID Sample Receiving Date	10/18/2005 H7.1_050538 LC Sciences, LLC   Sample01 10/10/2005   Sample02 10/10/2005

## II. Chip Content

The content of each chip is listed in a Layout File of a corresponding folder. For miRNA Human chip, five or more redundant regions are included. Each region further comprises a miRNA probe region, which detects miRNA transcripts listed in Sanger miRBase Release 7.1 (<http://www.sanger.ac.uk/Software/Rfam/mirna/>), and a miRNA\* probe region (labeled as S\_mmu\_###), which is designed to detect miRNA\*. The miRNA\* sequences are extracted from the stem-loop sequences (opposite of mature sequences) and are not experimentally verified. These probes may be used to detect the presence of miRNA\* and pre-miRNAs or to facilitate any other discovery uses.

Multiple control probes are included in each chip. The control probes are used for quality controls of chip production, sample labeling and assay conditions. Among the control probes, PUC2PM-20B and PUC2MM-20B are the perfect match and single-based match detection probes, respectively, of a 20-mer RNA positive control sequence that is spiked into the RNA samples before labeling. One may assess assay stringency from the intensity ratio of PUC2PM-20B and PUC2MM-20B, which is normally larger than 30.

When the option for custom probes is selected, custom probes are also included.



### III. Summary of Results

Following are representative regions of chips images. From Cy3 and Cy5 images one may directly read miRNA profiles and from Ratio images one may get a quick sense of differential expressions between the corresponding samples. The images are displayed in pseudo colors so as to expand visual dynamic range. In the Cy3 and Cy5 intensity images, as signal intensity increases from 1 to 65,535 the corresponding color changes from blue to green, to yellow, and to red. In the Cy3/Cy5 ratio image, when Cy3 level is higher than Cy5 level the color is green; when Cy3 level is equal to Cy5 level the color is yellow; and when Cy5 level is higher than Cy3 level the color is red.

In this section, a list of differentially expressed transcripts is also provided following the chip images. From the list, one can have a quick overview of the difference between the two samples on the chip.



Chip 1: H7.1b\_050538- Image

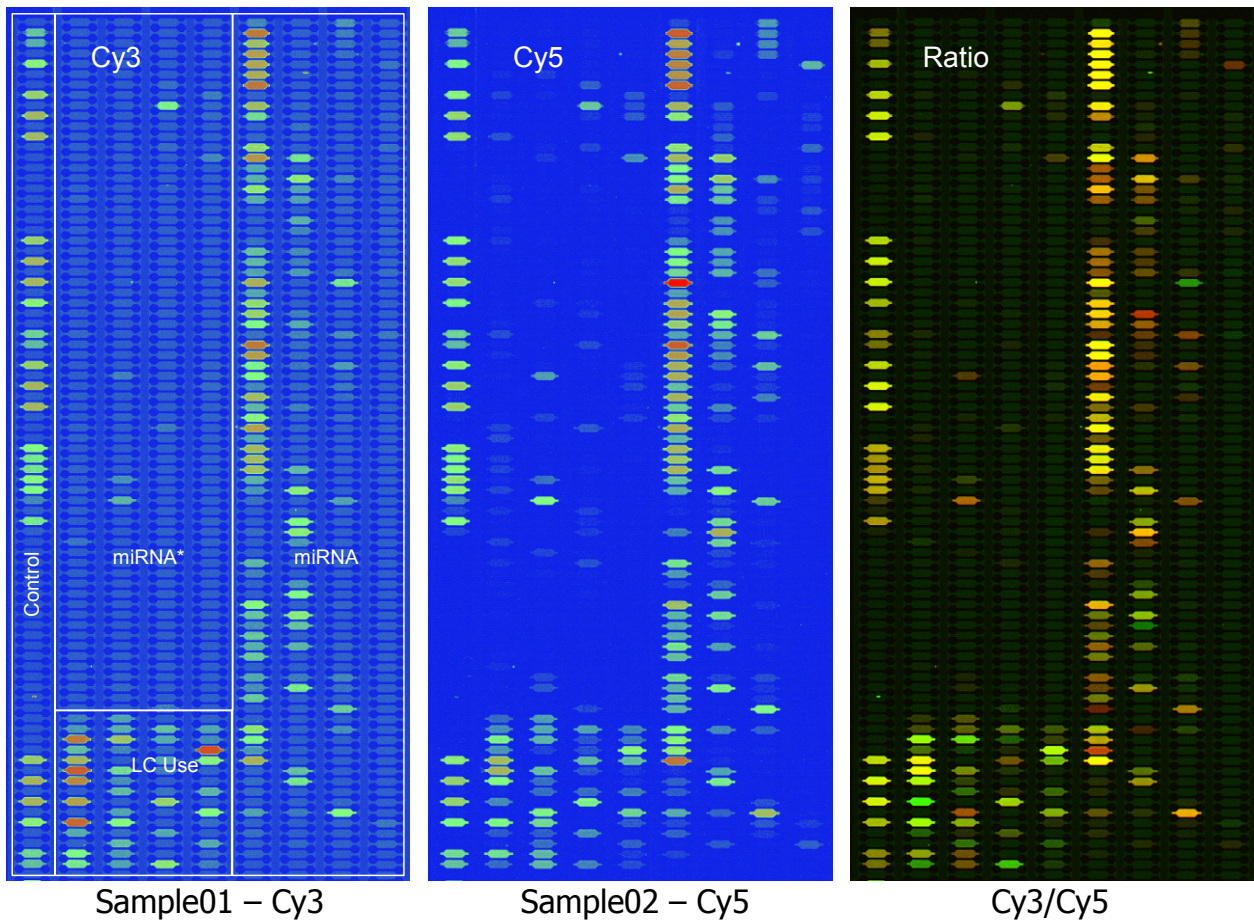


Table 1: Call list (differentially expressed transcripts with p-value &lt; 0.01)

No.	Probe_ID	Sample A Signal	Sample B Signal	log <sub>2</sub> (Sample B / Sample A)
1	hsa-miR-200c	3,683.56	28.89	-6.98
2	hsa-miR-122a	29.04	1,946.65	6.00
3	hsa-miR-335	5,571.29	97.47	-5.84
4	hsa-miR-514	121.03	7.42	-4.12
5	hsa-miR-509	100.34	6.13	-4.08
6	hsa-miR-210	54.63	781.63	4.01
7	hsa-miR-155	364.16	5,218.36	3.77
8	hsa-miR-31	196.06	17.19	-3.51
9	hsa-miR-126*	185.73	1,657.59	3.13
10	hsa-miR-139	18.93	157.86	3.06
11	hsa-miR-452	20.37	164.56	2.78
12	hsa-miR-422b	865.37	126.92	-2.75
13	hsa-miR-19a	66.93	446.40	2.71
14	hsa-miR-1	488.83	74.24	-2.54
15	hsa-miR-199a	1,176.17	216.31	-2.44
16	hsa-miR-25	195.14	1,000.58	2.34
17	hsa-miR-181d	115.44	541.22	2.30
18	hsa-miR-203	193.45	43.73	-2.20
19	hsa-miR-363	132.16	28.42	-2.17
20	hsa-miR-489	411.68	1,742.10	2.02
21	hsa-miR-196a	386.48	1,611.23	1.98
22	hsa-miR-365	106.30	369.03	1.80
23	hsa-miR-148a	1,435.30	459.12	-1.72
24	hsa-miR-429	307.23	92.22	-1.71
25	hsa-miR-214	4,247.20	1,377.48	-1.69
26	hsa-miR-223	162.44	559.78	1.67
27	hsa-miR-15a	1,661.67	4,754.40	1.64
28	hsa-miR-28	657.00	1,812.28	1.57
29	hsa-miR-374	279.79	884.83	1.56
30	hsa-miR-21	18,080.99	51,113.29	1.49
31	hsa-miR-200b	10,264.41	3,526.11	-1.49
32	hsa-miR-199a*	6,985.75	2,438.12	-1.48
33	hsa-miR-34a	198.23	540.34	1.45
34	hsa-miR-100	4,304.15	1,653.88	-1.41
35	hsa-miR-455	65.46	179.33	1.40
36	hsa-miR-15b	2,056.29	5,368.75	1.40
37	hsa-miR-181c	177.86	459.29	1.39
38	hsa-miR-194	8,220.71	3,406.31	-1.29
39	hsa-miR-342	1,135.12	2,751.47	1.28
40	hsa-miR-500	186.45	77.61	-1.17
41	hsa-miR-200a	1,927.79	862.14	-1.16
42	hsa-miR-99a	3,732.02	1,657.18	-1.13
43	hsa-miR-20b	1,106.17	2,397.30	1.09
44	hsa-miR-224	265.10	556.33	1.08
45	hsa-miR-181b	657.23	1,294.87	1.03
46	hsa-miR-107	4,436.64	2,187.74	-1.03



47	hsa-miR-22	1,961.11	968.41	-1.02
48	hsa-miR-125b	11,243.35	5,848.21	-0.98
49	hsa-miR-103	4,811.65	2,407.02	-0.97
50	hsa-miR-27a	6,285.56	11,776.07	0.91
51	hsa-miR-146b	970.94	1,755.02	0.85
52	hsa-miR-148b	262.33	465.82	0.84
53	hsa-miR-101	1,815.01	3,335.50	0.83
54	hsa-miR-10b	24,143.76	13,663.07	-0.78
55	hsa-miR-20a	2,769.06	4,725.48	0.77
56	hsa-let-7i	4,209.65	7,006.21	0.76
57	hsa-miR-17-5p	2,275.70	3,836.11	0.76
58	hsa-miR-19b	2,588.78	4,515.52	0.75
59	hsa-miR-27b	7,577.44	12,420.56	0.74
60	hsa-miR-181a	2,116.43	3,610.83	0.70
61	hsa-miR-143	6,213.40	9,642.61	0.68
62	hsa-miR-106b	1,003.33	1,553.58	0.68
63	hsa-miR-30d	15,945.88	9,406.37	-0.68
64	hsa-miR-192	10,325.58	6,404.42	-0.67
65	hsa-miR-146a	1,365.56	2,203.81	0.63
66	hsa-miR-93	622.53	934.69	0.63
67	hsa-miR-151	510.76	790.92	0.63
68	hsa-miR-30a-5p	21,267.50	13,127.93	-0.63
69	hsa-miR-106a	1,737.72	2,706.88	0.61
70	hsa-miR-16	10,051.77	14,945.33	0.57
71	hsa-miR-30e-3p	597.97	887.55	0.57
72	hsa-miR-451	8,181.29	12,191.68	0.57
73	hsa-miR-204	6,624.02	4,488.65	-0.55
74	hsa-miR-150	599.81	909.16	0.50
75	hsa-miR-221	1,247.65	886.55	-0.50
76	hsa-miR-30c	15,883.11	11,298.35	-0.48
77	hsa-miR-10a	11,373.14	7,780.49	-0.48
78	hsa-miR-98	5,886.44	8,011.16	0.48
79	hsa-miR-361	1,521.61	2,106.93	0.48
80	hsa-miR-126	17,973.44	24,426.50	0.45
81	hsa-miR-92	2,701.63	3,589.39	0.39
82	hsa-miR-195	10,386.36	13,713.29	0.39
83	hsa-miR-424	3,775.00	5,005.74	0.38
84	hsa-miR-26b	21,896.61	17,118.32	-0.36
85	hsa-miR-29c	7,297.58	5,578.63	-0.33
86	hsa-let-7e	16,197.24	19,094.67	0.32
87	hsa-miR-29a	15,168.76	12,148.13	-0.31
88	hsa-miR-30b	14,380.56	11,624.07	-0.31
89	hsa-miR-23a	11,479.26	13,579.57	0.30
90	hsa-let-7a	29,455.16	36,531.66	0.28
91	hsa-let-7b	15,223.43	18,302.31	0.26
92	hsa-miR-23b	12,779.92	14,652.60	0.23
93	hsa-let-7d	20,362.73	22,305.75	0.20
94	hsa-let-7c	22,129.07	25,318.37	0.19
95	hsa-miR-24	7,819.85	8,994.30	0.18
96	hsa-let-7f	30,997.19	34,152.92	0.15



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97	S-hsa-mir-486	409.25	69.89	-2.63
98	S-hsa-mir-224	26.50	148.16	2.46
99	S-hsa-mir-149	764.61	240.55	-1.64
100	S-hsa-mir-423	558.65	196.44	-1.51
101	S-hsa-mir-199b	6,733.47	2,554.47	-1.37
102	S-hsa-mir-151	3,083.80	4,921.35	0.65
103	S-hsa-mir-140	676.47	969.73	0.57



Following is the probe layout of the above images.

	S-hsa-mir-1-2	S-hsa-mir-103-2	S-hsa-mir-194-1	S-hsa-mir-377	hsa-miR-1	hsa-miR-133a	hsa-miR-221	hsa-miR-453
PUC2PM	S-hsa-mir-1-1	S-hsa-mir-103-1	S-hsa-mir-194-2	S-hsa-mir-379	hsa-let-7a	hsa-miR-133b	hsa-miR-222	hsa-miR-485-5p
PUC2MM	S-hsa-let-7a-1	S-hsa-mir-105-1	S-hsa-mir-195	S-hsa-mir-381	hsa-let-7b	hsa-miR-134	hsa-miR-223	hsa-miR-485-3p
BKGO	S-hsa-let-7a-2	S-hsa-mir-105-2	S-hsa-mir-196a-1	S-hsa-mir-382	hsa-let-7c	hsa-miR-135a	hsa-miR-224	hsa-miR-488
PUC2PM-20B	S-hsa-let-7a-3	S-hsa-mir-106a	S-hsa-mir-196a-2	S-hsa-mir-383	hsa-let-7d	hsa-miR-135b	hsa-miR-296	hsa-miR-489
PUC2MM-20B	S-hsa-let-7b	S-hsa-mir-106b	S-hsa-mir-196b	S-hsa-mir-384	hsa-let-7e	hsa-miR-136	hsa-miR-299-5p	hsa-miR-490
	S-hsa-let-7c	S-hsa-mir-107	S-hsa-mir-197	S-hsa-mir-422a	hsa-let-7f	hsa-miR-137	hsa-miR-299-3p	hsa-miR-491
a1-PUC2PM-20B	S-hsa-let-7d	S-hsa-mir-122a	S-hsa-mir-198	S-hsa-mir-423	hsa-miR-7	hsa-miR-138	hsa-miR-301	hsa-miR-492
a1-PUC2MM-20B	S-hsa-let-7e	S-hsa-mir-124a-1	S-hsa-mir-199b	S-hsa-mir-424	hsa-let-7g	hsa-miR-139	hsa-miR-302a*	hsa-miR-493
a2-PUC2PM-20B	S-hsa-let-7f-1	S-hsa-mir-124a-2	S-hsa-mir-200b	S-hsa-mir-425	hsa-let-7i	hsa-miR-140	hsa-miR-302a	hsa-miR-494
a2-PUC2MM-20B	S-hsa-let-7f-2	S-hsa-mir-124a-3	S-hsa-mir-200c	S-hsa-mir-428	hsa-miR-9	hsa-miR-141	hsa-miR-302b*	hsa-miR-495
a3-PUC2PM-20B	S-hsa-mir-7-1	S-hsa-mir-125b-1	S-hsa-mir-203	S-hsa-mir-449	hsa-miR-9*	hsa-miR-142-5p	hsa-miR-302b	hsa-miR-496
a3-PUC2MM-20B	S-hsa-mir-7-2	S-hsa-mir-125a	S-hsa-mir-204	S-hsa-mir-449	hsa-miR-10a	hsa-miR-142-3p	hsa-miR-302c*	hsa-miR-497
	S-hsa-mir-7-3	S-hsa-mir-125b-2	S-hsa-mir-205	S-hsa-mir-410	hsa-miR-10b	hsa-miR-143	hsa-miR-302c	hsa-miR-498
	S-hsa-let-7g	S-hsa-mir-127	S-hsa-mir-206	S-hsa-mir-412	hsa-miR-15a	hsa-miR-144	hsa-miR-302d	hsa-miR-499
	S-hsa-let-7i	S-hsa-mir-128a	S-hsa-mir-208	S-hsa-mir-431	hsa-miR-15b	hsa-miR-145	hsa-miR-320	hsa-miR-500
	S-hsa-mir-10a	S-hsa-mir-128b	S-hsa-mir-210	S-hsa-mir-433	hsa-miR-16	hsa-miR-146a	hsa-miR-323	hsa-miR-501
	S-hsa-mir-10b	S-hsa-mir-129-1	S-hsa-mir-211	S-hsa-mir-450-1	hsa-miR-17-5p	hsa-miR-146b	hsa-miR-324-5p	hsa-miR-502
	S-hsa-mir-15a	S-hsa-mir-129-2	S-hsa-mir-212	S-hsa-mir-450-2	hsa-miR-17-3p	hsa-miR-147	hsa-miR-324-3p	hsa-miR-503
	S-hsa-mir-15b	S-hsa-mir-130a	S-hsa-mir-214	S-hsa-mir-451	hsa-miR-18a	hsa-miR-148a	hsa-miR-325	hsa-miR-504
	S-hsa-mir-16-1	S-hsa-mir-130b	S-hsa-mir-215	S-hsa-mir-453	hsa-miR-18b	hsa-miR-148b	hsa-miR-326	hsa-miR-505
a1-PUC2PM-20B	S-hsa-mir-16-2	S-hsa-mir-132	S-hsa-mir-216	S-hsa-mir-488	hsa-miR-19a	hsa-miR-149	hsa-miR-328	hsa-miR-506
a1-PUC2MM-20B	S-hsa-mir-18a	S-hsa-mir-133a-1	S-hsa-mir-217	S-hsa-mir-489	hsa-miR-19b	hsa-miR-150	hsa-miR-329	hsa-miR-507
a2-PUC2PM-20B	S-hsa-mir-18b	S-hsa-mir-133a-2	S-hsa-mir-218-1	S-hsa-mir-490	hsa-miR-20a	hsa-miR-151	hsa-miR-330	hsa-miR-508
a2-PUC2MM-20B	S-hsa-mir-19a	S-hsa-mir-133b	S-hsa-mir-218-2	S-hsa-mir-491	hsa-miR-20b	hsa-miR-152	hsa-miR-331	hsa-miR-509
a3-PUC2PM-20B	S-hsa-mir-19b-1	S-hsa-mir-134	S-hsa-mir-219-1	S-hsa-mir-492	hsa-miR-21	hsa-miR-153	hsa-miR-335	hsa-miR-510
a3-PUC2MM-20B	S-hsa-mir-19b-2	S-hsa-mir-135a-1	S-hsa-mir-219-2	S-hsa-mir-493	hsa-miR-22	hsa-miR-154	hsa-miR-337	hsa-miR-511
PUC2PM-20B	S-hsa-mir-20a	S-hsa-mir-135a-2	S-hsa-mir-220	S-hsa-mir-494	hsa-miR-23a	hsa-miR-154*	hsa-miR-338	hsa-miR-512-5p
PUC2MM-20B	S-hsa-mir-20b	S-hsa-mir-135b	S-hsa-mir-221	S-hsa-mir-495	hsa-miR-23b	hsa-miR-155	hsa-miR-339	hsa-miR-512-3p
BKGO	S-hsa-mir-21	S-hsa-mir-136	S-hsa-mir-222	S-hsa-mir-496	hsa-miR-24	hsa-miR-181a	hsa-miR-340	hsa-miR-513
PUC2PM	S-hsa-mir-22	S-hsa-mir-137	S-hsa-mir-223	S-hsa-mir-497	hsa-miR-25	hsa-miR-181b	hsa-miR-342	hsa-miR-514
PUC2MM	S-hsa-mir-23a	S-hsa-mir-138-2	S-hsa-mir-224	S-hsa-mir-498	hsa-miR-26a	hsa-miR-181c	hsa-miR-345	hsa-miR-515-5p
	S-hsa-mir-23b	S-hsa-mir-138-1	S-hsa-mir-296	S-hsa-mir-499	hsa-miR-26b	hsa-miR-181d	hsa-miR-346	hsa-miR-515-3p
a1-PUC2PM-20B	S-hsa-mir-24-2	S-hsa-mir-139	S-hsa-mir-301	S-hsa-mir-500	hsa-miR-27a	hsa-miR-182	hsa-miR-361	hsa-miR-516-5p
a1-PUC2MM-20B	S-hsa-mir-25	S-hsa-mir-140	S-hsa-mir-302d	S-hsa-mir-501	hsa-miR-27b	hsa-miR-182*	hsa-miR-362	hsa-miR-516-3p
a2-PUC2PM-20B	S-hsa-mir-26a-1	S-hsa-mir-141	S-hsa-mir-320	S-hsa-mir-502	hsa-miR-28	hsa-miR-183	hsa-miR-363	hsa-miR-517*
a2-PUC2MM-20B	S-hsa-mir-26b	S-hsa-mir-143	S-hsa-mir-323	S-hsa-mir-503	hsa-miR-29a	hsa-miR-184	hsa-miR-365	hsa-miR-517a
a3-PUC2PM-20B	S-hsa-mir-26a-2	S-hsa-mir-144	S-hsa-mir-325	S-hsa-mir-504	hsa-miR-29b	hsa-miR-185	hsa-miR-367	hsa-miR-517b
a3-PUC2MM-20B	S-hsa-mir-27a	S-hsa-mir-145	S-hsa-mir-326	S-hsa-mir-505	hsa-miR-29c	hsa-miR-186	hsa-miR-368	hsa-miR-517c
	S-hsa-mir-27b	S-hsa-mir-146a	S-hsa-mir-328	S-hsa-mir-506	hsa-miR-30a-5p	hsa-miR-187	hsa-miR-369-5p	hsa-miR-518*
	S-hsa-mir-28	S-hsa-mir-146b	S-hsa-mir-329-1	S-hsa-mir-507	hsa-miR-30a-3p	hsa-miR-188	hsa-miR-369-3p	hsa-miR-518f
a-PUC2PM	S-hsa-mir-29a	S-hsa-mir-147	S-hsa-mir-329-2	S-hsa-mir-508	hsa-miR-30c	hsa-miR-189	hsa-miR-370	hsa-miR-518b
a-PUC2MM	S-hsa-mir-29b-1	S-hsa-mir-148a	S-hsa-mir-330	S-hsa-mir-509	hsa-miR-30d	hsa-miR-190	hsa-miR-371	hsa-miR-518c*
a-PUC2MMb	S-hsa-mir-29b-2	S-hsa-mir-148b	S-hsa-mir-331	S-hsa-mir-510	hsa-miR-30b	hsa-miR-191	hsa-miR-372	hsa-miR-518c
a-PUC2MMc	S-hsa-mir-29c	S-hsa-mir-149	S-hsa-mir-335	S-hsa-mir-511-1	hsa-miR-30e-5p	hsa-miR-191*	hsa-miR-373*	hsa-miR-518e
a-PUC2MMd	S-hsa-mir-30c-2	S-hsa-mir-150	S-hsa-mir-337	S-hsa-mir-511-2	hsa-miR-30e-3p	hsa-miR-192	hsa-miR-373	hsa-miR-518a
a-PUC2MM2	S-hsa-mir-30d	S-hsa-mir-151	S-hsa-mir-338	S-hsa-mir-513-1	hsa-miR-31	hsa-miR-193a	hsa-miR-374	hsa-miR-518d
a-PUC2MM2c	S-hsa-mir-30b	S-hsa-mir-152	S-hsa-mir-339	S-hsa-mir-513-2	hsa-miR-32	hsa-miR-193b	hsa-miR-375	hsa-miR-518a-2*
a-PUC2MM2c	S-hsa-mir-30c-1	S-hsa-mir-153-1	S-hsa-mir-340	S-hsa-mir-514-1	hsa-miR-33	hsa-miR-194	hsa-miR-376a	hsa-miR-519e*
a-PUC2MM2d	S-hsa-mir-31	S-hsa-mir-153-2	S-hsa-mir-342	S-hsa-mir-514-2	hsa-miR-34a	hsa-miR-195	hsa-miR-376b	hsa-miR-519e
	S-hsa-mir-32	S-hsa-mir-155	S-hsa-mir-345	S-hsa-mir-514-3	hsa-miR-34b	hsa-miR-196a	hsa-miR-377	hsa-miR-519c
	S-hsa-mir-33	S-hsa-mir-181a	S-hsa-mir-346	S-hsa-mir-516-1	hsa-miR-34c	hsa-miR-196b	hsa-miR-378	hsa-miR-519b
	S-hsa-mir-34a	S-hsa-mir-181b-1	S-hsa-mir-361	S-hsa-mir-516-2	hsa-miR-92	hsa-miR-197	hsa-miR-379	hsa-miR-519d
	S-hsa-mir-34b	S-hsa-mir-181c	S-hsa-mir-362	S-hsa-mir-518b	hsa-miR-93	hsa-miR-198	hsa-miR-380-5p	hsa-miR-519a
	S-hsa-mir-34c	S-hsa-mir-181b-2	S-hsa-mir-363	S-hsa-mir-519a-2	hsa-miR-95	hsa-miR-199a	hsa-miR-380-3p	hsa-miR-520e
	S-hsa-mir-92-1	S-hsa-mir-181d	S-hsa-mir-365-1	S-hsa-mir-519d	hsa-miR-96	hsa-miR-199a*	hsa-miR-381	hsa-miR-520f
	S-hsa-mir-92-2	S-hsa-mir-183	S-hsa-mir-365-2	S-hsa-mir-520b	hsa-miR-98	hsa-miR-199b	hsa-miR-382	hsa-miR-520a*
	S-hsa-mir-93	S-hsa-mir-184	S-hsa-mir-367	S-hsa-mir-520e	hsa-miR-99a	hsa-miR-200b	hsa-miR-383	hsa-miR-520a
	S-hsa-mir-95	S-hsa-mir-185	S-hsa-mir-368	S-hsa-mir-520f	hsa-miR-99b	hsa-miR-200c	hsa-miR-384	hsa-miR-520b
	S-hsa-mir-96	S-hsa-mir-186	S-hsa-mir-370	S-hsa-mir-520g	hsa-miR-100	hsa-miR-200a*	hsa-miR-409-5p	hsa-miR-520c
	S-hsa-mir-98	S-hsa-mir-187	S-hsa-mir-371	S-hsa-mir-520h	hsa-miR-101	hsa-miR-200a	hsa-miR-409-3p	hsa-miR-520d*
	S-hsa-mir-99a	S-hsa-mir-188	S-hsa-mir-372	S-hsa-mir-521-1	hsa-miR-103	hsa-miR-202*	hsa-miR-410	hsa-miR-520d
	S-hsa-mir-99b	S-hsa-mir-190	S-hsa-mir-374	S-hsa-mir-521-2	hsa-miR-105	hsa-miR-202	hsa-miR-412	hsa-miR-520g
	S-hsa-mir-100	S-hsa-mir-192	S-hsa-mir-375	S-hsa-mir-526a-1	hsa-miR-106a	hsa-miR-203	hsa-miR-422b	hsa-miR-520h
	S-hsa-mir-101-1	S-hsa-mir-193a	S-hsa-mir-376a	S-hsa-mir-526a-2	hsa-miR-106b	hsa-miR-204	hsa-miR-422a	hsa-miR-521
	S-hsa-mir-101-2	S-hsa-mir-193b	S-hsa-mir-376b	S-hsa-mir-527	hsa-miR-107	hsa-miR-205	hsa-miR-423	hsa-miR-522
	S-hsa-mir-483	S-hsa-mir-484	S-hsa-mir-486	S-hsa-mir-487	hsa-miR-122a	hsa-miR-206	hsa-miR-424	hsa-miR-523
5S-rRNA-1	DG9990-3	DP5880-3	S-hsa-mir-455	hsa-miR-124a	hsa-miR-208	hsa-miR-425	hsa-miR-524*	
5S-rRNA-2	DG9992-3	DP9990-3	DT9991-3	hsa-miR-125b	hsa-miR-210	hsa-miR-429	hsa-miR-524	
5S-rRNA-3	DH5880-3	DQ5880-3	DT9992-3	hsa-miR-125a	hsa-miR-211	hsa-miR-431	hsa-miR-525	
5S-rRNA-4	DI5880-3	DQ9990-3	DV5880-3	hsa-miR-126*	hsa-miR-212	hsa-miR-432	hsa-miR-525*	
a1-PUC2PM-20B	5S-rRNA-5	DK5880-3	DQ9991-3	hsa-miR-126	hsa-miR-213	hsa-miR-432*	hsa-miR-526c	
a1-PUC2MM-20B	5S-rRNA-6	DK9990-3	DQ9992-3	hsa-miR-127	hsa-miR-214	hsa-miR-433	hsa-miR-526b	
a2-PUC2PM-20B	DA5880-3	DK9991-3	DR5880-3	hsa-miR-128a	hsa-miR-215	hsa-miR-448	hsa-miR-526b*	
a2-PUC2MM-20B	DA5881-3	DL5880-3	DR5881-3	DV9995-3	hsa-miR-128b	hsa-miR-216	hsa-miR-449	hsa-miR-526a
a3-PUC2PM-20B	DC5880-3	DL5881-3	DR9990-3	DW5880-3	hsa-miR-129	hsa-miR-217	hsa-miR-450	hsa-miR-527
a3-PUC2MM-20B	DD5880-3	DL9990-3	DS5880-3	DX5880-3	hsa-miR-130a	hsa-miR-218	hsa-miR-451	hsa-miR-18a*
PUC2PM-20B	DE5880-3	DM5880-3	DS5881-3	DX9990-3	hsa-miR-130b	hsa-miR-219	hsa-miR-452	hsa-miR-363
PUC2MM-20B	DE5881-3	DM5881-3	DS9990-3	DX9991-3	hsa-miR-132	hsa-miR-220	hsa-miR-452*	hsa-miR-410
BKGO	DE9990-3	DN5880-3	DS9993-3	DY5880-3	hsa-miR-483	hsa-miR-486	hsa-miR-487	hsa-miR-455
PUC2PM	DF5880-3	DN9990-3	DS9994-3	DY9990-3	hsa-miR-484			
PUC2MM	DG5880-3	DN9991-3	DT5880-3	DY9991-3				





## IV. Data Analysis

We provide the result of a data analysis in data files (Chip#\_Data.xls). There are seven worksheets in each file as described in the following.

- Worksheet “File Info” – provides information on data files, samples, and data analysis parameters.
- Worksheet “Simple Differential” – lists all differentially expressed transcripts with p-value < 0.01. Mature miRNAs and miRNA\*s are sorted separately according to differential ratios. The ratio values are presented in  $\log_2$  scale for quick and easy assessing differential direction as well as magnitude. A positive  $\log_2$  value indicates an upper regulation and a negative  $\log_2$  value indicates a down regulation. One can easily convert a  $\log_2$  value into an arithmetic ratio on a calculator by typing in  $2^{(\text{value})}$ . Detailed data processing statistics are listed in Worksheet “Differential Data”.
- Worksheet “Simple Detectable” – lists average signal values all transcripts on the array. The signal values are derived by background subtraction and normalization. Blank spaces represent signal values below detection level. A transcript to be listed as detectable must meet at least two conditions: signal intensity higher than  $3 \times$  (background standard deviation) and spot CV < 0.5. CV is calculated by (standard deviation)/(signal intensity). When repeating probes are present on an array, a transcript is listed as detectable only if the signals from at least 50% of the repeating probes are above detection level. Detailed data processing statistics are listed in Worksheet “Detectable Transcripts”.
- Worksheet “Raw Data” – lists raw data extracted from image files with corresponding probe, sequence, and location information.
- Worksheet “Processed Data” – lists processed data, including background-subtracted and normalized signals, p-values, statistically significant log ratios of Cy3 and Cy5 labeled transcripts, and a scatter plot of the processed data.
- Worksheet “Differential Data” – lists all differentially expressed transcripts with p-value < 0.01 along with data processing statistics. Signals are listed in median signal values of repeating probes of p-value < 0.01 that are listed in the upper portion of the table on Worksheet “Processed Data”. Median values are used to minimize the effect of occasional “non-uniform spots” that may have signal values deviate from average signal values but have p-values < 0.01.
- Worksheet “Detectable Transcripts” – lists all the transcripts with signals above detection levels along with data processing statistics. Signal intensities are listed in average values of repeating spots. During data process, “bad spots” that have signal values deviated more than 50% of average values of repeating spots and/or spot CV larger than 0.5 are discarded.

In data file package a probe layout file containing a complete list of probe positions and target sequences is included in the file directory of each chip.



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## V. Suggestions for Data Analysis

In case you want to perform your own data analysis we have the following suggestions.

1. Background should be calculated from the median of 5% to 25% of low intensity cells. BKG0 and blank cells should be excluded for the background calculation.
2. All "Production\_Use\_Probes" (including BKG0, PUC2 ...) and blank cells which are listed in a supplied layout file, should be excluded during data normalization.

