

**Supplementary Table S1. miRNAs with different expression levels were tested by qRT-PCR.**

Average expression level(TPM)	miRNA_Name	HSCs(TPM)	imDCs(TPM)	maDCs(TPM)	DCregs(TPM)	Average(TPM)	qRT-PCR correlated with sequencing
>5000	mmu-let-7d	50438.9	34331.7	69669.4	44473.7	49728.4	No
	mmu-miR-29a	31269.9	48046	54571.2	57230.4	47779.4	yes
	mmu-miR-191	61246.3	31608.4	27120.4	7052.2	31756.8	No
	mmu-miR-378	25858.1	54156	10968.9	4643.2	23906.6	Yes
	mmu-miR-185	21263.7	16915	19344.1	16414.1	18484.2	Yes
	mmu-miR-25	31966.5	11013.9	4262.9	3156.7	12600.0	Yes
	mmu-miR-192	8391.9	7746.2	5836.8	4531.3	6626.6	Yes
	mmu-miR-103	6612.6	10521.9	6243.7	2487.6	6466.5	Yes
	mmu-miR-23a	3826.4	11000.8	3697.6	4120.8	5661.4	Yes
1000-5000	mmu-miR-340	7225.2	7002.6	2785.3	1406.5	4604.9	Yes
	mmu-miR-744	4970.1	8703.9	2491.3	1683.5	4462.2	No
	mmu-miR-30d	4134.7	4324.1	2058.5	3021.7	3384.8	Yes
	mmu-miR-93	5856.7	4919.8	425	266	2866.9	Yes
	mmu-miR-210	150.2	4955	2629.6	2409.8	2536.2	Yes
	mmu-miR-451	9189.3	16	0.4	1.1	2301.7	Yes
	mmu-miR-503	4229.8	1946.1	863.1	928.5	1991.9	Yes
	mmu-miR-101a	2396.1	1057.3	1400.9	1639.4	1623.4	Yes
	mmu-miR-155	47.6	2608.8	2651.4	140.9	1362.2	Yes
	mmu-miR-22	436.3	2332.1	1121.6	1340.1	1307.5	Yes
	mmu-miR-181d	3684.6	764.2	345.9	168.7	1240.9	Yes
	mmu-miR-144	4328.2	1	0.4	0.4	1082.5	Yes

	mmu-miR-98	856.7	1460.5	819.1	346.3	870.7	Yes
	mmu-miR-17	875.4	670.9	535.6	227.4	577.3	Yes
	mmu-miR-31	33.1	12.6	34.9	1738.1	454.7	Yes
	mmu-miR-130a	372.4	18.3	30.4	1085.9	376.8	Yes
100-1000	mmu-miR-147	28.2	745.2	589	82.2	361.2	Yes
	mmu-miR-132	14.4	455.3	373.6	67.9	227.8	Yes
	mmu-miR-125a-5p	45.4	50.8	107.7	423	156.7	Yes
	mmu-miR-34c	4.3	127.4	236.6	202.1	142.6	No
	mmu-miR-99a	175.3	29.7	8.3	344.8	139.5	Yes
	mmu-miR-486	448.8	4.4	4.5	1.5	114.8	Yes
10-100	mmu-miR-10b	15.4	1.9	7.4	55.4	20.0	Yes

Abbreviations: TPM, transcripts per million; HSCs, hematopoietic stem cells; imDCs, immature dendritic cells; maDCs, mature dendritic cells; DCregs, regulatory dendritic cells.

**Supplementary Table S2. Novel predicted miRNAs with library counts as well as mature sequence.** 53 novel miRNA candidates were sequenced in at least two samples, 40 of them were validated by qRT-PCR in myelogenous cell line RAW cells, 24 novel miRNA candidates were up-regulated upon TSA treatment.

Name	Sequence (5p)	Sequence (3p)	Source:count(sum):count(5p):count(3p)	Detected by qRT-PCR in RAW cells	Up-regulation by TSA treatment in RAW cells
DCm001	-	GGGGATGTAGCTCAGATGGT	DCreg:202:0:202 imDC:101:0:101 HSC:19:0:19 maDC:48:0:48	yes	yes
DCm002	AAGGTGGCTGTGGTTGTTTGC	AAAGCACCCATGGCCACT	imDC:56:54:2 maDC:30:27:3 HSC:17:13:4 DCreg:10:6:4	yes	yes
DCm003	CCGGGCGGGCGGGCGAGCGG	GTGCGCGGGACTCGGGCGGGC	imDC:12:11:0 DCreg:13:13:0 maDC:6:6:0 HSC:36:35:1	yes	yes
DCm004	AGGAGTGAGTGGAAGCTGGTG	-	maDC:16:16:0 HSC:12:12:0 imDC:49:49:0	yes	yes
DCm005	TGGGATCATTGTGGGAGAAGAG	-	maDC:16:16:0 DCreg:11:11:0 imDC:18:18:0	yes	yes
DCm006	AGTACCACCATACACAGCTTTT	GAGCTGGGTGTGGTGACATGC	HSC:18:13:5 imDC:10:8:2 maDC:9:8:1	yes	yes
DCm007	-	GTCAGGATGGCCGAGCGGTCTAAG	imDC:124:0:124 maDC:204:0:204	yes	yes
DCm008	CGGTCTAAGCGCTGCGTTC	-	HSC:77:77:0 imDC:10:10:0	yes	yes
DCm009	-	AGCCCGGGCTGGGGTGGGTGT	maDC:19:0:19 imDC:15:0:15	yes	yes
DCm010	-	TAGGGGCTGGAAAGGTGACT	maDC:10:0:10 HSC:19:0:19	yes	yes
DCm011	-	GTGTCTGAAGACAGCTATGATGAA	HSC:10:0:10 imDC:16:0:16	yes	yes
DCm012	AGGTCCGGCTGTCGCGGGCT	AGCCCGTGGCGGCTTCAGGAC	MDC31:6:5:1 imDC:19:18:1	yes	yes
DCm013	ACTGAGGAAGGAGGTGGAGG	-	maDC:13:13:0 DCreg:11:11:0	yes	yes
DCm014	-	TGAAGTGGATGGAACAGGAGAGT	imDC:8:0:8 DCreg:16:0:16	yes	yes
DCm015	ACCCACTCCTGGTACCATT	-	HSC:11:11:0 DCreg:11:11:0	yes	yes
DCm016	-	TCTGAAAAGGTCATCGGCAGA	imDC:5:0:5 HSC:17:0:17	yes	yes
DCm017	ACTCGGGACTGGAGGGATGG	-	maDC:13:12:0 HSC:8:8:0	yes	yes
DCm018	-	TGGACCAAGTAAAAATAAAGCT	imDC:10:0:10 maDC:9:0:9	yes	yes
DCm019	-	AGCCCGGGGCTGCGGAGACACA	HSC:6:0:6 imDC:11:0:10	yes	yes
DCm020	GCTGACTGGGAAGGAAATGG	GTCTCTTTCTTCGGCTCTAGT	imDC:10:10:0 HSC:6:5:1	yes	yes

DCm021	-	TATATAAATATGTGTATGT	imDC:6:0:6 HSC:5:0:5	yes	yes
DCm022	-	AGGGGACTGGCGAGACCCGAA	HSC:6:0:6 DCreg:5:0:5	yes	yes
DCm023	TATATAAATATGTGTATGT	-	HSC:5:5:0 imDC:5:5:0	yes	yes
DCm024	-	TGTGGAGCTCACCTATGATGGC	maDC:5:0:5 DCreg:5:0:5	yes	yes
DCm025	-	GGGGCTGGAAGGATGGCTCAGT	maDC:73:0:73 HSC:21:0:21 imDC:205:0:205 DCreg:18:0:18	yes	no
DCm026	-	GGCTGGTCCGAAGGTAGTGAGTT	maDC:52:0:52 imDC:68:0:68 HSC:101:0:101 DCreg:53:0:53	yes	no
DCm027	-	TGACTCTGTACATGGCATTAT	HSC:52:0:52 DCreg:33:0:33 maDC:39:0:39 imDC:31:0:31	yes	no
DCm028	-	GATGGAGAGATTTCAGCGGT	HSC:9:0:9 DCreg:7:0:7 imDC:21:0:21 maDC:23:0:23	yes	no
DCm029	-	AGAGGACAAGCATGCACTTTT	DCreg:11:0:11 maDC:47:0:47 imDC:46:0:46	yes	no
DCm030	ACTCTCTCACTCTGCATGGTAC	TGACTTTCGTACGGAGAGAGAG	imDC:11:9:2 HSC:10:10:0 maDC:6:6:0	yes	no
DCm031	-	TAGGATTTGCTGAAGGAGGCAA	imDC:5:0:5 DCreg:7:0:7 HSC:13:0:13	yes	no
DCm032	-	TCAGATGTGTGCAGAGTCCAA	maDC:8:0:8 imDC:11:0:11 DCreg:5:0:5	yes	no
DCm033	-	TACGTACACACTCGGACGCACA	imDC:38:0:38 HSC:21:0:21	yes	no
DCm034	CAGGTCTGTAATCTTGGTGGTCGA	GTTCACTGTAAGGGCGGACCGACA	maDC:11:11:0 HSC:17:17:0	yes	no
DCm035	AAGGGCCCAGCACTCTCCAGAG	CCTGGGAGTTCAGGGACCCTGGA	imDC:19:5:14 maDC:8:0:8	yes	no
DCm036	-	TCCGGCTGGGGTAGCAGTAG	imDC:14:0:14 maDC:11:0:11	yes	no
DCm037	AGCTGGCCAGATGGTAGTTCT	AACTTCTATCCTGACCCGCTGA	imDC:11:10:1 maDC:11:10:1	yes	no
DCm038	-	ATGGTGATGGAGATGATGGTGA	imDC:9:0:9 maDC:10:0:10	yes	no
DCm039	-	TCGGCGAGGCCCGGAGGACAG	DCreg:5:0:5 imDC:13:0:13	yes	no
DCm040	TGTAGAAGGAAGGGCTGCTGT	-	DCreg:5:5:0 imDC:10:10:0	yes	no
DCm041	TCTGGGGCTTGTGTGGTAG	-	maDC:14:14:0 imDC:21:21:0 HSC:22:22:0	no	
DCm042	-	CCAGGAGTAGTGGCACTATCT	maDC:10:0:10 HSC:9:0:9 imDC:17:0:17	no	
DCm043	-	CCAGAGTGGACGGAACACCGA	maDC:13:0:13 imDC:8:0:8 HSC:4:0:4	no	
DCm044	GAGCCATCTCTAGCCCTGA	AGGGACTGCAGAGATGGCACTG	imDC:8:1:7 maDC:5:0:5 HSC:5:1:4	no	
DCm045	TAGGTAGACCAGGCTGATCT	-	imDC:15:15:0 HSC:13:13:0	no	
DCm046	-	TGTGTTGGACAGGTAAGTGTAT	maDC:6:0:6 imDC:17:0:17	no	
DCm047	ACGGAGACAGAAGGAAGTTGCC	-	maDC:9:9:0 imDC:13:12:0	no	
DCm048	CGGGAGGCTGAGACAGGAGGA	-	DCreg:12:12:0 HSC:9:9:0	no	

DCm049	TGCGGAGCGTGGACACGGTCT	-	DCreg:5:5:0 HSC:14:14:0	no
DCm050	TCATCAAGTCTGGCTCTTTTT	ATGAGCCAGGTTGGTGGCT	maDC:5:5:0 imDC:11:10:1	no
DCm051	AACTACCACCTCTGGCCTTT	AAGTCCAGGAGGTGGTAGTA	maDC:6:0:6 HSC:9:1:8	no
DCm052	AAGTGAAAGCCAGCTGAGA	-	maDC:5:5:0 imDC:8:8:0	no
DCm053	-	TTGTGAGGAGCTGAAGAGTGGT	HSC:8:0:8 maDC:5:0:5	no

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Abbreviations: HSC, hematopoietic stem cell; imDC, immature dendritic cell; maDC, mature dendritic cell; DCreg, regulatory dendritic cell; TSA, Trichostatin A.