

Expression of microRNAs in the hypothalamus of pregnant and non-pregnant goats

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Electronic Supplementary Material (ESM)

Table S1. Data of the sequence distribution chart of sRNAs

Table S2. Data of distribution of small RNAs in various categories

Table S3. All known microRNAs with significantly different expression levels in the NH and PH groups

Table S4. All novel microRNAs with significantly different expression levels in the NH and PH groups

Figure S1. Sequence distribution chart of sRNAs

Figure S2. Distribution of small RNAs in various categories

Figure S3. Clustering of differentially expressed microRNAs in microRNA libraries

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Table S1A. Data of the sequence distribution chart of sRNAs, total number of reads – sRNA distribution

sRNA	Number of reads	Percentage
specific in NH	787814	3.41%
specific in PH	262978	1.14%
common in PH and NH	22082507	95.45%

Table S1B. Data of the sequence distribution chart of sRNAs, types of unique sequences – sRNA distribution

sRNA	Types	Percentage
specific in NH	555732	66.78%
specific in PH	193513	23.25%
common in PH and NH	82916	9.96%

Table S2A. Data of distribution of small RNAs in various categories, total number of reads in the non-pregnancy group

Categories	Number of reads	Percentage
intron-antisense	1477256	12.53%
intron-sense	279704	2.37%
snRNA	41999	0.36%
exon-sense	234498	1.99%
unann	3526621	29.92%
rRNA	2479154	21.03%
snoRNA	31063	0.26%
repeat	271046	2.30%
exon-antisense	3391	0.03%
miRNA	3074674	26.08%
tRNA	369130	3.13%

Table S2B. Data of distribution of small RNAs in various categories, total number of reads in the pregnancy group

Categories	Number of reads	Percentage
intron-antisense	1319487	11.63%
intron-sense	141601	1.25%
snRNA	16914	0.15%
exon-sense	69555	0.61%
unann	3115832	27.46%
rRNA	813810	7.17%
snoRNA	33747	0.30%
repeat	130330	1.15%
exon-antisense	3877	0.03%
miRNA	5571881	49.11%
tRNA	127729	1.13%

Table S2C. Data of distribution of small RNAs in various categories, types of unique sequences in the non-pregnancy group

Categories	Types	Percentage
intron-antisense	7408	1.16%
intron-sense	56582	8.86%
snRNA	5135	0.80%
exon-sense	154518	24.19%
unann	285139	44.65%
rRNA	46267	7.24%
snoRNA	4198	0.66%
repeat	57978	9.08%
exon-antisense	1771	0.28%
miRNA	3089	0.48%
tRNA	16563	2.59%

Table S2D. Data of distribution of small RNAs in various categories, types of unique sequences in the pregnancy group

Categories	Types	Percentage
intron-antisense	3710	1.34%
intron-sense	16790	6.07%
snRNA	2417	0.87%
exon-sense	42426	15.35%
unann	151730	54.89%
rRNA	24335	8.80%
snoRNA	3128	1.13%
repeat	18856	6.82%
exon-antisense	683	0.25%
miRNA	3666	1.33%
tRNA	8688	3.14%

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Table S3. All known microRNAs with significantly different expression levels in the NH and PH groups

miR_name	PH-totalP-reads	NH-totalP-reads	PH-expressed	NH-expressed	PH-std	NH-std	fold-change (log ₂ NH/PH)	P-value	sig-lable	trend (PHvsNH)
chi-mir-10	7952562	7970767	0	36	0.01	4.5165	8.8190614	1.52E-11	**	up
chi-mir-124	7952562	7970767	0	13	0.01	1.631	7.34961297	0.000124	**	up
chi-mir-128	7952562	7970767	0	24	0.01	3.011	8.2340989	6.13E-08	**	up
chi-mir-129	7952562	7970767	0	10	0.01	1.2546	6.97108366	0.000989	**	up
chi-mir-130	7952562	7970767	0	179	0.01	22.4571	11.13295592	1.6E-54	**	up
chi-mir-133	7952562	7970767	0	13	0.01	1.631	7.34961297	0.000124	**	up
chi-mir-136	7952562	7970767	0	18	0.01	2.2583	7.81909334	3.9E-06	**	up
chi-mir-148	7952562	7970767	0	17	0.01	2.1328	7.73660488	7.79E-06	**	up
chi-mir-154	7952562	7970767	0	24	0.01	3.011	8.2340989	6.13E-08	**	up
chi-mir-155	7952562	7970767	0	65	0.01	8.1548	9.67150568	2.92E-20	**	up
chi-mir-21	7952562	7970767	0	9	0.01	1.1291	6.81902946	0.001976	**	up
chi-mir-30	7952562	7970767	0	79	0.01	9.9112	9.95291593	1.81E-24	**	up
chi-mir-34	7952562	7970767	0	8	0.01	1.0037	6.64918431	0.003947	**	up
chi-mir-181	7952562	7970767	17	0	2.1377	0.01	-7.73991558	7.47E-06	**	down
chi-mir-190	7952562	7970767	17	0	2.1377	0.01	-7.73991558	7.47E-06	**	down
chi-mir-206	7952562	7970767	18	0	2.2634	0.01	-7.82234776	3.73E-06	**	down
chi-mir-28	7952562	7970767	22	9	2.7664	1.1291	-1.29283651	0.019721	*	down
chi-mir-9	7952562	7970767	23	7	2.8921	0.8782	-1.719496	0.00326	**	down
chi-mir-191	7952562	7970767	28	0	3.5209	0.01	-8.45980045	3.6E-09	**	down
chi-mir-151	7952562	7970767	29	11	3.6466	1.38	-1.40188369	0.004226	**	down
chi-mir-140	7952562	7970767	33	9	4.1496	1.1291	-1.87779901	0.000165	**	down
chi-mir-122	7952562	7970767	42	20	5.2813	2.5092	-1.07366563	0.00501	**	down
chi-mir-150	7952562	7970767	42	13	5.2813	1.631	-1.69513631	7.08E-05	**	down
chi-mir-17	7952562	7970767	47	19	5.91	2.3837	-1.30995545	0.000504	**	down
chi-mir-125	7952562	7970767	112	42	14.0835	5.2693	-1.41832269	9.65E-09	**	down
chi-mir-1	7952562	7970767	114	54	14.335	6.7748	-1.08129164	2.89E-06	**	down
chi-mir-27	7952562	7970767	175	71	22.0055	8.9075	-1.30477167	1.61E-11	**	down
chi-mir-16	7952562	7970767	253	106	31.8136	13.2986	-1.25836926	3.23E-15	**	down
chi-mir-19	7952562	7970767	493	137	61.9926	17.1878	-1.85071112	1.93E-48	**	down
chi-mir-107	7952562	7970767	634	89	79.7227	11.1658	-2.83590395	9.9E-103	**	down
chi-mir-153	7952562	7970767	1262	495	158.691	62.1019	-1.353511	1.23E-77	**	down
chi-mir-29	7952562	7970767	1674	667	210.4982	83.6808	-1.33083935	8.4E-100	**	down
chi-miR-100-5p	7952562	7970767	666475	252015	83806.326	31617.409	-1.40633999	0	**	down
chi-let-7f-5p	7952562	7970767	764667	218829	96153.542	27453.9451	-1.80832652	0	**	down
chi-miR-99b-5p	7952562	7970767	375361	161849	47200.009	20305.3232	-1.21692915	0	**	down
chi-miR-9-5p	7952562	7970767	343258	152285	43163.197	19105.4387	-1.17581834	0	**	down
chi-miR-125a-5p	7952562	7970767	280437	89370	35263.73	11212.2209	-1.65311301	0	**	down
chi-miR-127-3p	7952562	7970767	112377	39592	14130.918	4967.1506	-1.50836478	0	**	down
chi-miR-125b-5p	7952562	7970767	108230	36659	13609.451	4599.181	-1.56515995	0	**	down
chi-miR-148a-3p	7952562	7970767	57538	24181	7235.1526	3033.7106	-1.25393998	0	**	down

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Table S3 to be continued

miR_name	PH-totalP-reads	NH-totalP-reads	PH-expressed	NH-expressed	PH-std	NH-std	fold-change (log ₂ NH/PH)	P-value	sig-lable trend (PHvsNH)
chi-miR-10b-5p	7952562	7970767	6897	23373	867.2677	2932.3401	1.75750316	0	** down
chi-let-7c-5p	7952562	7970767	41973	20605	5277.9218	2585.0712	-1.02976596	0	** down
chi-miR-409-3p	7952562	7970767	52800	17293	6639.3698	2169.5528	-1.61364861	0	** down
chi-miR-99a-5p	7952562	7970767	60480	16555	7605.0963	2076.9645	-1.87248996	0	** down
chi-miR-410-3p	7952562	7970767	37368	14908	4698.8631	1870.3344	-1.3290155	0	** down
chi-miR-181c-5p	7952562	7970767	33670	11556	4233.8557	1449.7977	-1.54612049	0	** down
chi-let-7e-5p	7952562	7970767	65164	11131	8194.0889	1396.4779	-2.5527908	0	** down
chi-miR-660	7952562	7970767	23920	10939	3007.8357	1372.3899	-1.13203535	0	** down
chi-miR-28-3p	7952562	7970767	22314	9328	2805.8882	1170.2763	-1.26160834	0	** down
chi-miR-222-3p	7952562	7970767	21689	5959	2727.2972	747.6068	-1.86712033	0	** down
chi-miR-423-5p	7952562	7970767	32482	4130	4084.4699	518.1434	-2.97872552	0	** down
chi-miR-500-3p	7952562	7970767	7789	3496	979.4328	438.6027	-1.15903182	0	** down
chi-miR-146b-5p	7952562	7970767	1540	3432	193.6483	430.5734	1.15282036	1.3E-161	** down
chi-miR-29a-3p	7952562	7970767	5804	2904	729.8277	364.3313	-1.00230496	1.6E-217	** down
chi-miR-409-5p	7952562	7970767	12155	2895	1528.4383	363.2022	-2.07321347	0	** down
chi-miR-136-3p	7952562	7970767	6362	2663	799.9938	334.0958	-1.25972697	0	** down
chi-miR-1343	7952562	7970767	14504	2494	1823.8148	312.8934	-2.5432161	0	** down
chi-miR-485-5p	7952562	7970767	12095	2444	1520.8935	306.6204	-2.31039354	0	** down
chi-miR-181d	7952562	7970767	4864	1999	611.6268	250.7914	-1.28616375	1.4E-271	** down
chi-miR-145-5p	7952562	7970767	704	1837	88.5249	230.4672	1.38040623	3.2E-115	** down
chi-miR-130a-3p	7952562	7970767	3169	1509	398.4879	189.3168	-1.07373348	9.5E-134	** down
chi-miR-150	7952562	7970767	2885	1370	362.7762	171.8781	-1.07769408	1.2E-122	** down
chi-miR-129-3p	7952562	7970767	561	1293	70.5433	162.2178	1.20135116	3.73E-66	** down
chi-miR-9-3p	7952562	7970767	3251	1208	408.7991	151.5538	-1.43156199	2.5E-214	** down
chi-miR-3955-5p	7952562	7970767	2983	1189	375.0992	149.1701	-1.3303138	3.2E-176	** down
chi-miR-487b-3p	7952562	7970767	2339	1031	294.1191	129.3477	-1.18514607	5.5E-116	** down
chi-miR-421-3p	7952562	7970767	2185	989	274.7542	124.0784	-1.14688955	4.9E-103	** down
chi-miR-320-3p	7952562	7970767	2689	960	338.13	120.4401	-1.48926221	2.5E-188	** down
chi-miR-383	7952562	7970767	2530	931	318.1365	116.8018	-1.4455834	1.1E-169	** down
chi-miR-877-5p	7952562	7970767	4727	860	594.3996	107.8943	-2.46181449	0	** down
chi-miR-335-5p	7952562	7970767	3097	809	389.4342	101.4959	-1.93995814	6.3E-314	** down
chi-miR-3431-3p	7952562	7970767	1987	790	249.8566	99.1122	-1.33396577	1.6E-118	** down
chi-miR-361-5p	7952562	7970767	1694	788	213.0131	98.8613	-1.10746437	5.25E-76	** down
chi-miR-153	7952562	7970767	2638	782	331.717	98.1085	-1.75750291	3.9E-234	** down
chi-miR-133a-3p	7952562	7970767	297	754	37.3465	94.5957	1.34080156	2.51E-46	** down
chi-miR-504	7952562	7970767	2463	749	309.7115	93.9684	-1.72067736	2.1E-212	** down
chi-miR-199a-3p	7952562	7970767	1536	610	193.1453	76.5296	-1.33559681	3.18E-92	** down
chi-miR-199b-3p	7952562	7970767	1534	610	192.8938	76.5296	-1.33371701	6.54E-92	** down
chi-miR-199c-3p	7952562	7970767	1534	610	192.8938	76.5296	-1.33371701	6.54E-92	** down
chi-miR-335-3p	7952562	7970767	6238	565	784.4013	70.884	-3.46806	0	** down

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Table S3 to be continued

miR_name	PH-totalP-reads	NH-totalP-reads	PH-expressed	NH-expressed	PH-std	NH-std	fold-change (log ₂ NH/PH)	P-value	sig-lable trend (PHvsNH)
chi-miR-296-3p	7952562	7970767	4109	483	516.6888	60.5964	-3.09199162	0	** down
chi-miR-221-5p	7952562	7970767	1675	477	210.6239	59.8437	-1.81539787	3.6E-156	** down
chi-miR-708-5p	7952562	7970767	146	396	18.3589	49.6815	1.43622911	1.07E-27	** down
chi-miR-767	7952562	7970767	1748	376	219.8034	47.1724	-2.22019879	1.3E-211	** down
chi-miR-136-5p	7952562	7970767	1109	322	139.4519	40.3976	-1.7874261	7.2E-102	** down
chi-miR-224-5p	7952562	7970767	1067	317	134.1706	39.7703	-1.75430523	1.31E-95	** down
chi-miR-148b-3p	7952562	7970767	695	313	87.3932	39.2685	-1.15414854	2.67E-34	** down
chi-miR-671-3p	7952562	7970767	767	303	96.4469	38.0139	-1.34320782	2.43E-47	** down
chi-miR-127-5p	7952562	7970767	740	293	93.0518	36.7593	-1.33992476	1.43E-45	** down
chi-miR-34c-5p	7952562	7970767	3519	275	442.4989	34.5011	-3.6809596	0	** down
chi-miR-16b-5p	7952562	7970767	126	268	15.844	33.6229	1.08550756	5.95E-13	** down
chi-miR-191-3p	7952562	7970767	659	262	82.8664	32.8701	-1.3340114	1.67E-40	** down
chi-miR-2411-5p	7952562	7970767	708	240	89.0279	30.11	-1.56401482	1.29E-54	** down
chi-miR-376a	7952562	7970767	819	237	102.9857	29.7337	-1.79227312	5.53E-76	** down
chi-miR-628-5p	7952562	7970767	479	211	60.2322	26.4717	-1.18608411	3.81E-25	** down
chi-miR-1307-5p	7952562	7970767	730	192	91.7943	24.088	-1.93008996	6.13E-75	** down
chi-miR-105b-5p	7952562	7970767	749	176	94.1835	22.0807	-2.09268843	3.0E-85	** down
chi-miR-369-3p	7952562	7970767	617	173	77.5851	21.7043	-1.83779872	1.22E-59	** down
chi-miR-193a	7952562	7970767	83	167	10.4369	20.9516	1.00536716	9.62E-08	** down
chi-miR-193b-3p	7952562	7970767	83	167	10.4369	20.9516	1.00536716	9.62E-08	** down
chi-miR-199b-5p	7952562	7970767	399	137	50.1725	17.1878	-1.54551193	5.43E-31	** down
chi-miR-199c-5p	7952562	7970767	399	137	50.1725	17.1878	-1.54551193	5.43E-31	** down
chi-miR-873-3p	7952562	7970767	489	128	61.4896	16.0587	-1.93698731	5.3E-51	** down
chi-miR-130b-5p	7952562	7970767	348	127	43.7595	15.9332	-1.45756021	4.19E-25	** down
chi-miR-30f-3p	7952562	7970767	323	124	40.6158	15.5568	-1.38449573	8.76E-22	** down
chi-miR-873-5p	7952562	7970767	436	117	54.8251	14.6786	-1.90112216	1.44E-44	** down
chi-miR-30c-3p	7952562	7970767	296	111	37.2207	13.9259	-1.41833462	8.81E-21	** down
chi-miR-411a-3p	7952562	7970767	354	110	44.514	13.8004	-1.68954906	3.01E-31	** down
chi-miR-3959-5p	7952562	7970767	443	106	55.7053	13.2986	-2.06654022	2.5E-50	** down
chi-miR-199a-5p	7952562	7970767	230	98	28.9215	12.2949	-1.23408238	1.36E-13	** down
chi-miR-543-3p	7952562	7970767	444	97	55.8311	12.1695	-2.19779909	2.07E-54	** down
chi-miR-135a	7952562	7970767	307	93	38.6039	11.6676	-1.72623877	4.24E-28	** down
chi-miR-374b-3p	7952562	7970767	203	88	25.5264	11.0403	-1.20921071	7.95E-12	** down
chi-miR-758	7952562	7970767	387	85	48.6636	10.664	-2.19009437	1.95E-47	** down
chi-miR-542-3p	7952562	7970767	181	80	22.76	10.0367	-1.18121556	2.33E-10	** down
chi-miR-365-3p	7952562	7970767	38	77	4.7783	9.6603	1.01557056	0.000271	** down
chi-miR-137	7952562	7970767	327	76	41.1188	9.5348	-2.10852358	1.61E-38	** down
chi-miR-183	7952562	7970767	31	76	3.8981	9.5348	1.29043158	1.18E-05	** up
chi-let-7a-3p	7952562	7970767	34	70	4.2754	8.7821	1.03850656	0.000408	** up
chi-miR-105a	7952562	7970767	353	68	44.3882	8.5312	-2.37935562	7.28E-48	** down

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Table S3 to be continued

miR_name	PH-totalP-reads	NH-totalP-reads	PH-expressed	NH-expressed	PH-std	NH-std	fold-change (log ₂ NH/PH)	P-value	sig-label	trend (PHvsNH)
chi-miR-99b-3p	7952562	7970767	145	66	18.2331	8.2803	-1.13880493	3.67E-08	**	down
chi-miR-505-3p	7952562	7970767	113	55	14.2093	6.9002	-1.0421254	6.19E-06	**	down
chi-miR-1185-5p	7952562	7970767	107	53	13.4548	6.6493	-1.01684657	1.64E-05	**	down
chi-miR-211	7952562	7970767	161	49	20.245	6.1475	-1.71949391	2.27E-15	**	down
chi-miR-494	7952562	7970767	134	46	16.8499	5.7711	-1.54582179	2.17E-11	**	down
chi-miR-329b-3p	7952562	7970767	261	45	32.8196	5.6456	-2.53935884	1.69E-38	**	down
chi-miR-2483-5p	7952562	7970767	149	41	18.7361	5.1438	-1.86491423	7.43E-16	**	down
chi-miR-2483-3p	7952562	7970767	83	40	10.4369	5.0183	-1.05642264	9.16E-05	**	down
chi-miR-450-5p	7952562	7970767	215	39	27.0353	4.8929	-2.46608266	5.63E-31	**	down
chi-miR-454-5p	7952562	7970767	86	39	10.8141	4.8929	-1.1441519	2.16E-05	**	down
chi-miR-33b-5p	7952562	7970767	105	37	13.2033	4.642	-1.50808013	6.12E-09	**	down
chi-miR-105b-3p	7952562	7970767	149	35	18.7361	4.391	-2.09319924	3.24E-18	**	down
chi-miR-499-5p	7952562	7970767	95	35	11.9458	4.391	-1.44388203	8.75E-08	**	down
chi-miR-544-5p	7952562	7970767	111	33	13.9578	4.1401	-1.75333404	2.7E-11	**	down
chi-miR-381	7952562	7970767	76	32	9.5567	4.0147	-1.25122035	1.84E-05	**	down
chi-miR-2411-3p	7952562	7970767	81	30	10.1854	3.7638	-1.43624077	8.77E-07	**	down
chi-miR-532-3p	7952562	7970767	58	29	7.2932	3.6383	-1.00328745	0.001759	**	down
chi-miR-379-3p	7952562	7970767	103	27	12.9518	3.3874	-1.93490235	6.8E-12	**	down
chi-miR-188-5p	7952562	7970767	59	27	7.419	3.3874	-1.13104638	0.000504	**	down
chi-miR-323b	7952562	7970767	85	26	10.6884	3.2619	-1.71226145	1.03E-08	**	down
chi-miR-3959-3p	7952562	7970767	104	19	13.0775	2.3837	-2.45581219	1.18E-15	**	down
chi-miR-223-5p	7952562	7970767	1	19	0.1257	2.3837	4.24514612	2.14E-05	**	down
chi-miR-301a-5p	7952562	7970767	41	18	5.1556	2.2583	-1.19090318	0.002594	**	down
chi-miR-133b	7952562	7970767	2	18	0.2515	2.2583	3.16660685	0.000226	**	down
chi-miR-34b-5p	7952562	7970767	370	16	46.5259	2.0073	-4.5347059	3.9E-89	**	down
chi-miR-134	7952562	7970767	63	16	7.922	2.0073	-1.98060845	5.55E-08	**	down
chi-miR-33a-5p	7952562	7970767	50	14	6.2873	1.7564	-1.83981916	4.29E-06	**	down
chi-miR-29a-5p	7952562	7970767	41	14	5.1556	1.7564	-1.5535189	0.000227	**	down
chi-miR-17-3p	7952562	7970767	33	14	4.1496	1.7564	-1.24035084	0.005383	**	down
chi-miR-411b-3p	7952562	7970767	60	13	7.5447	1.631	-2.20970675	1.32E-08	**	down
chi-miR-25-5p	7952562	7970767	52	13	6.5388	1.631	-2.00326911	6.91E-07	**	down
chi-miR-500-5p	7952562	7970767	28	13	3.5209	1.631	-1.11018747	0.019139	**	down
chi-miR-2284e	7952562	7970767	50	11	6.2873	1.38	-2.18777234	2.65E-07	**	down
chi-miR-656	7952562	7970767	24	11	3.0179	1.38	-1.12887674	0.028321	**	down
chi-miR-29b-5p	7952562	7970767	3	11	0.3772	1.38	1.87126669	0.035539	**	down
chi-miR-215-5p	7952562	7970767	71	9	8.9279	1.1291	-2.9831476	2.28E-13	**	down
chi-miR-184	7952562	7970767	40	9	5.0298	1.1291	-2.15532777	5.41E-06	**	down
chi-miR-424-3p	7952562	7970767	34	9	4.2754	1.1291	-1.92088614	0.000103	**	down
chi-miR-2318	7952562	7970767	2	9	0.2515	1.1291	2.16654296	0.038944	**	down
chi-miR-34b-3p	7952562	7970767	168	8	21.1253	1.0037	-4.3955718	1.85E-40	**	down

Table S3 to be continued

miR_name	PH-totalP-reads	NH-totalP-reads	PH-expressed	NH-expressed	PH-std	NH-std	fold-change (log ₂ NH/PH)	P-value	sig-lable trend (PHvsNH)
chi-miR-141	7952562	7970767	57	8	7.1675	1.0037	-2.83614188	1.69E-10	** down
chi-miR-106a-5p	7952562	7970767	0	8	0.01	1.0037	6.64918431	0.003947	** down
chi-miR-1185-3p	7952562	7970767	18	6	2.2634	0.7528	-1.58815303	0.014406	** down
chi-miR-34c-3p	7952562	7970767	18	5	2.2634	0.6273	-1.8512641	0.006502	** down
chi-miR-7-5p	7952562	7970767	244	3	30.6819	0.3764	-6.34897739	8.52E-69	** down
chi-miR-542-5p	7952562	7970767	14	3	1.7604	0.3764	-2.22556474	0.007432	** down
chi-miR-411b-5p	7952562	7970767	14	2	1.7604	0.2509	-2.8107189	0.002315	** down
chi-miR-200a	7952562	7970767	11	2	1.3832	0.2509	-2.4628254	0.012788	** down
chi-miR-208b	7952562	7970767	23	1	2.8921	0.1255	-4.52635817	1.51E-06	** down
chi-miR-93-3p	7952562	7970767	9	1	1.1317	0.1255	-3.1727323	0.011596	** down
chi-miR-876-3p	7952562	7970767	8	0	1.006	0.01	-6.65248649	0.003866	** down

NH = non-pregnant goat hypothalamus; PH = pregnant goat hypothalamus

<https://doi.org/10.17221/113/2020-CJAS>

Table S4. All novel microRNAs with significantly different expression levels in the NH and PH groups

miR-name	PH-totalP-reads	NH-totalP-reads	PH-expressed	NH-expressed	PH-std	NH-std	fold-change (log ₂ NH/PH)	P-value	sig-lable trend (NHvsPH)
novel-mir-159	7952562	7970767	37607	12897	4728.9163	1618.0375	-1.54726456	0.00E+00	** down
novel-mir-55	7952562	7970767	18133	2822	2280.1457	354.0437	-2.68712666	0	** down
novel-mir-176	7952562	7970767	2523	0	317.2563	0.01	-14.95335921	0.00E+00	** down
novel-mir-61	7952562	7970767	2245	793	282.299	99.4885	-1.50462234	6.0587E-160	** down
novel-mir-244	7952562	7970767	1044	0	131.2784	0.01	-13.68034182	1.61E-315	** down
novel-mir-280	7952562	7970767	1041	0	130.9012	0.01	-13.67619058	1.29E-314	** down
novel-mir-53	7952562	7970767	384	186	48.2863	23.3353	-1.0490999	4.51E-17	** down
novel-mir-62	7952562	7970767	334	139	41.999	17.4387	-1.26806248	7.92E-20	** down
novel-mir-8	7952562	7970767	303	108	38.1009	13.5495	-1.49158546	8.9353E-23	** down
novel-mir-250	7952562	7970767	285	0	35.8375	0.01	-11.80725439	1.15975E-86	** down
novel-mir-161	7952562	7970767	252	0	31.6879	0.01	-11.6297162	1.03E-76	** down
novel-mir-245	7952562	7970767	232	0	29.173	0.01	-11.51041808	1.1099E-70	** down
novel-mir-65	7952562	7970767	188	94	23.6402	11.7931	-1.00329924	1.52598E-08	** down
novel-mir-246	7952562	7970767	131	0	16.4727	0.01	-10.68586138	3.15858E-40	** down
novel-mir-121	7952562	7970767	130	44	16.3469	5.5202	-1.56622463	2.8082E-11	** down
novel-mir-109	7952562	7970767	115	344	14.4607	43.1577	1.57748059	1.23E-27	** down
novel-mir-89	7952562	7970767	114	28	14.335	3.5128	-2.02884856	9.20E-14	** down
novel-mir-152	7952562	7970767	100	33	12.5746	4.1401	-1.60277499	3.03E-09	** down
novel-mir-119	7952562	7970767	98	21	12.3231	2.6346	-2.22570938	2.43E-13	** down
novel-mir-158	7952562	7970767	97	40	12.1973	5.0183	-1.2812912	7.97664E-07	** down
novel-mir-91	7952562	7970767	93	21	11.6943	2.6346	-2.15014966	2.97867E-12	** down
novel-mir-185	7952562	7970767	85	0	10.6884	0.01	-10.06183023	2.34274E-26	** down
novel-mir-108	7952562	7970767	78	8	9.8082	1.0037	-3.28866028	7.72241E-16	** down
novel-mir-12	7952562	7970767	75	25	9.4309	3.1365	-1.58823989	3.50843E-07	** down
novel-mir-179	7952562	7970767	70	0	8.8022	0.01	-9.78172036	7.80957E-22	** down
novel-mir-46	7952562	7970767	57	15	7.1675	1.8819	-1.92928003	3.89E-07	** down
novel-mir-11	7952562	7970767	52	18	6.5388	2.2583	-1.53378875	3.73E-05	** down
novel-mir-84	7952562	7970767	50	19	6.2873	2.3837	-1.39923793	1.60E-04	** down
novel-mir-169	7952562	7970767	44	0	5.5328	0.01	-9.11186598	5.39913E-14	** down
novel-mir-215	7952562	7970767	43	0	5.4071	0.01	-9.07871123	1.08E-13	** down
novel-mir-201	7952562	7970767	35	0	4.4011	0.01	-8.78172036	2.79E-11	** down
novel-mir-234	7952562	7970767	34	0	4.2754	0.01	-8.73991561	5.59232E-11	** down
novel-mir-256	7952562	7970767	34	0	4.2754	0.01	-8.73991561	5.59232E-11	** down
novel-mir-292	7952562	7970767	33	0	4.1496	0.01	-8.69682848	1.11974E-10	** down
novel-mir-293	7952562	7970767	32	0	4.0239	0.01	-8.65245065	2.24E-10	** down
novel-mir-257	7952562	7970767	28	0	3.5209	0.01	-8.45980045	3.60373E-09	** down
novel-mir-38	7952562	7970767	27	8	3.3951	1.0037	-1.75812595	0.001165354	** down
novel-mir-254	7952562	7970767	27	0	3.3951	0.01	-8.40731028	7.21572E-09	** down
novel-mir-278	7952562	7970767	27	0	3.3951	0.01	-8.40731028	7.22E-09	** down
novel-mir-87	7952562	7970767	25	10	3.1436	1.2546	-1.32519019	0.011112957	* down

<https://doi.org/10.17221/113/2020-CJAS>

Table S4 to be continued

miR-name	PH-totaP-reads	NH-totaP-reads	PH-expressed	NH-expressed	PH-std	NH-std	fold-change (log ₂ NH/PH)	P-value	sig-lable trend (NHvsPH)
novel-mir-279	7952562	7970767	24	0	3.0179	0.01	-8.2374012	5.79242E-08	** down
novel-mir-104	7952562	7970767	22	119	2.7664	14.9296	2.43209383	1.75431E-17	** down
novel-mir-287	7952562	7970767	22	0	2.7664	0.01	-8.11186598	2.32E-07	** down
novel-mir-118	7952562	7970767	21	9	2.6407	1.1291	-1.22574715	0.028980352	* down
novel-mir-63	7952562	7970767	21	9	2.6407	1.1291	-1.22574715	0.028980352	* down
novel-mir-236	7952562	7970767	20	0	2.5149	0.01	-7.97435724	9.31037E-07	** down
novel-mir-269	7952562	7970767	20	0	2.5149	0.01	-7.97435724	9.31E-07	** down
novel-mir-270	7952562	7970767	19	0	2.3892	0.01	-7.90038382	1.86E-06	** down
novel-mir-217	7952562	7970767	18	0	2.2634	0.01	-7.82234776	3.73268E-06	** down
novel-mir-264	7952562	7970767	18	0	2.2634	0.01	-7.82234776	3.73268E-06	** down
novel-mir-226	7952562	7970767	17	0	2.1377	0.01	-7.73991558	7.47E-06	** down
novel-mir-260	7952562	7970767	16	0	2.0119	0.01	-7.65241478	1.50E-05	** down
novel-mir-80	7952562	7970767	15	5	1.8862	0.6273	-1.58825519	0.026250729	* down
novel-mir-210	7952562	7970767	15	0	1.8862	0.01	-7.55933885	3.00E-05	** down
novel-mir-211	7952562	7970767	15	0	1.8862	0.01	-7.55933885	3.00E-05	** down
novel-mir-294	7952562	7970767	15	0	1.8862	0.01	-7.55933885	2.99641E-05	** down
novel-mir-214	7952562	7970767	14	0	1.7604	0.01	-7.45975945	5.99968E-05	** down
novel-mir-216	7952562	7970767	14	0	1.7604	0.01	-7.45975945	5.99968E-05	** down
novel-mir-259	7952562	7970767	14	0	1.7604	0.01	-7.45975945	6.00E-05	** down
novel-mir-281	7952562	7970767	14	0	1.7604	0.01	-7.45975945	5.99968E-05	** down
novel-mir-282	7952562	7970767	14	0	1.7604	0.01	-7.45975945	5.99968E-05	** down
novel-mir-172	7952562	7970767	13	0	1.6347	0.01	-7.35288209	0.000120131	** down
novel-mir-228	7952562	7970767	13	0	1.6347	0.01	-7.35288209	0.000120131	** down
novel-mir-283	7952562	7970767	13	0	1.6347	0.01	-7.35288209	1.20E-04	** down
novel-mir-223	7952562	7970767	12	0	1.5089	0.01	-7.23735339	2.41E-04	** down
novel-mir-232	7952562	7970767	12	0	1.5089	0.01	-7.23735339	0.000240537	** down
novel-mir-263	7952562	7970767	12	0	1.5089	0.01	-7.23735339	0.000240537	** down
novel-mir-212	7952562	7970767	11	0	1.3832	0.01	-7.11186596	0.000481624	** down
novel-mir-248	7952562	7970767	11	0	1.3832	0.01	-7.11186596	0.000481624	** down
novel-mir-289	7952562	7970767	11	0	1.3832	0.01	-7.11186596	0.000481624	** down
novel-mir-290	7952562	7970767	11	0	1.3832	0.01	-7.11186596	0.000481624	** down
novel-mir-94	7952562	7970767	10	26	1.2575	3.2619	1.37515415	7.79E-03	** down
novel-mir-180	7952562	7970767	10	0	1.2575	0.01	-6.97441459	9.64E-04	** down
novel-mir-203	7952562	7970767	10	0	1.2575	0.01	-6.97441459	0.000964351	** down
novel-mir-221	7952562	7970767	10	0	1.2575	0.01	-6.97441459	0.000964351	** down
novel-mir-238	7952562	7970767	10	0	1.2575	0.01	-6.97441459	0.000964351	** down
novel-mir-251	7952562	7970767	10	0	1.2575	0.01	-6.97441459	9.64E-04	** down
novel-mir-255	7952562	7970767	10	0	1.2575	0.01	-6.97441459	0.000964351	** down
novel-mir-284	7952562	7970767	10	0	1.2575	0.01	-6.97441459	0.000964351	** down
novel-mir-286	7952562	7970767	10	0	1.2575	0.01	-6.97441459	9.64E-04	** down

Table S4 to be continued

miR-name	PH-totalP-reads	NH-totalP-reads	PH-expressed	NH-expressed	PH-std	NH-std	fold-change (log ₂ NH/PH)	P-value	sig-label	trend (NHvsPH)
novel-mir-295	7952562	7970767	10	0	1.2575	0.01	-6.97441459	0.000964351	**	down
novel-mir-240	7952562	7970767	9	0	1.1317	0.01	-6.82234776	0.00193091	**	down
novel-mir-253	7952562	7970767	9	0	1.1317	0.01	-6.82234776	1.93E-03	**	down
novel-mir-207	7952562	7970767	8	0	1.006	0.01	-6.65248649	3.87E-03	**	down
novel-mir-239	7952562	7970767	8	0	1.006	0.01	-6.65248649	3.87E-03	**	down
novel-mir-243	7952562	7970767	8	0	1.006	0.01	-6.65248649	3.87E-03	**	down
novel-mir-67	7952562	7970767	0	51	0.01	6.3984	9.32156738	4.71275E-16	**	up
novel-mir-142	7952562	7970767	0	43	0.01	5.3947	9.07539892	1.20E-13	**	up
novel-mir-123	7952562	7970767	0	41	0.01	5.1438	9.00669074	4.77E-13	**	up
novel-mir-115	7952562	7970767	0	39	0.01	4.8929	8.93454599	1.90E-12	**	up
novel-mir-64	7952562	7970767	0	34	0.01	4.2656	8.73660488	6.06E-11	**	up
novel-mir-96	7952562	7970767	0	24	0.01	3.011	8.2340989	6.13E-08	**	up
novel-mir-111	7952562	7970767	0	13	0.01	1.631	7.34961297	0.000124039	**	up
novel-mir-114	7952562	7970767	0	12	0.01	1.5055	7.2340989	2.48E-04	**	up
novel-mir-72	7952562	7970767	0	12	0.01	1.5055	7.2340989	2.48E-04	**	up
novel-mir-92	7952562	7970767	0	12	0.01	1.5055	7.2340989	0.000247794	**	up
novel-mir-116	7952562	7970767	0	11	0.01	1.38	7.10852446	0.000495023	**	up
novel-mir-77	7952562	7970767	0	11	0.01	1.38	7.10852446	0.000495023	**	up
novel-mir-83	7952562	7970767	0	11	0.01	1.38	7.10852446	4.95E-04	**	up
novel-mir-31	7952562	7970767	0	10	0.01	1.2546	6.97108366	0.000988914	**	up
novel-mir-3	7952562	7970767	0	9	0.01	1.1291	6.81902946	0.00197557	**	up
novel-mir-37	7952562	7970767	0	9	0.01	1.1291	6.81902946	1.98E-03	**	up
novel-mir-73	7952562	7970767	0	9	0.01	1.1291	6.81902946	1.98E-03	**	up
novel-mir-132	7952562	7970767	0	8	0.01	1.0037	6.64918431	3.95E-03	**	up
novel-mir-4	7952562	7970767	0	8	0.01	1.0037	6.64918431	0.003946628	**	up
novel-mir-59	7952562	7970767	0	8	0.01	1.0037	6.64918431	0.003946628	**	up
novel-mir-60	7952562	7970767	0	8	0.01	1.0037	6.64918431	0.003946628	**	up
novel-mir-71	7952562	7970767	0	8	0.01	1.0037	6.64918431	0.003946628	**	up
novel-mir-79	7952562	7970767	0	8	0.01	1.0037	6.64918431	0.003946628	**	up

NH = non-pregnant goat hypothalamus; PH = pregnant goat hypothalamus

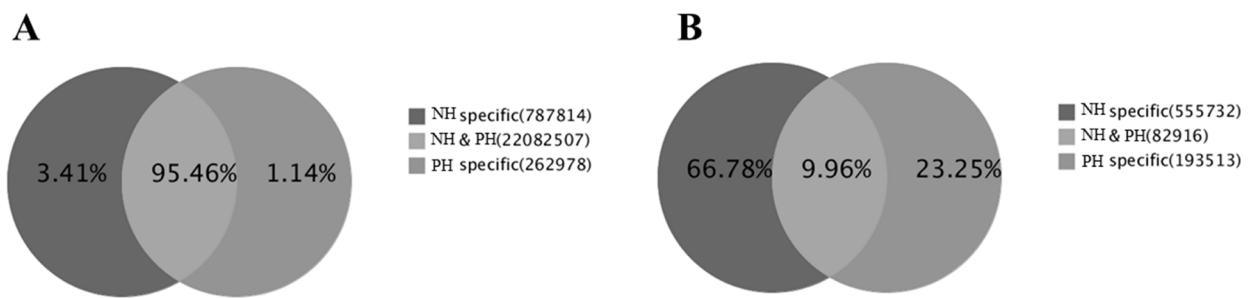


Figure S1. Sequence distribution chart of sRNAs

(A) Total number of reads – sRNA distribution chart; (B) types of unique sequences – sRNA distribution chart

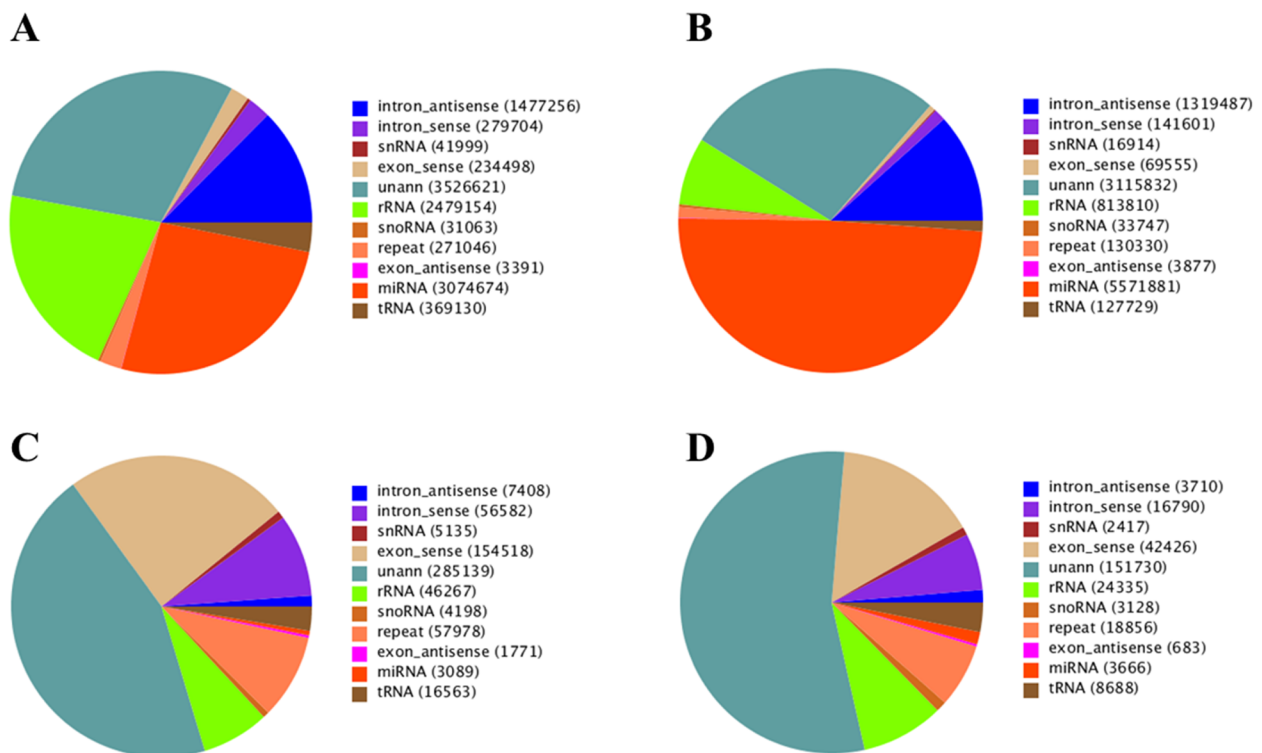


Figure S2. Distribution of small RNAs in various categories

(A and C) The total number of reads and types of unique sequences in the non-pregnancy group; (B and D) the total number of reads and types of unique sequences in the pregnancy group

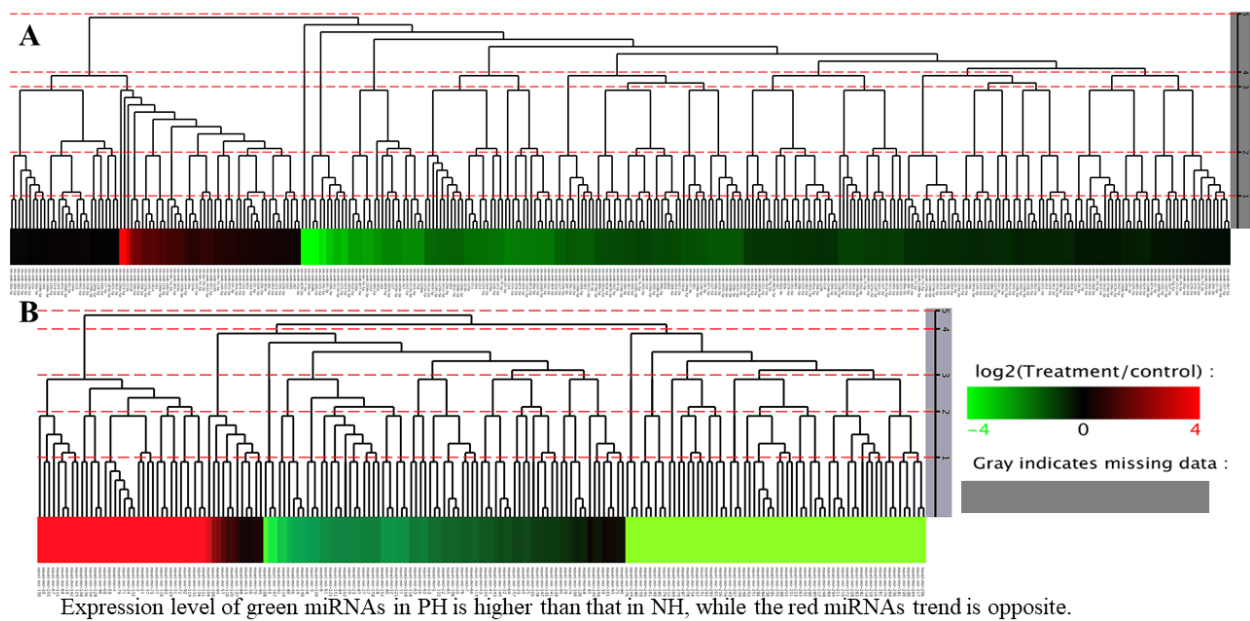


Figure S3. Clustering of differentially expressed microRNAs in microRNA libraries
(A) Known microRNAs; (B) novel microRNAs