

1 **Supplementary table 1: List of miRNAs associated with Matsuda Index.**

miRNA	miRNA detection rate (%) [*]	DESeq2 normalised reads count (Mean ± SD)	Fold change [†]	p-value	FDR q-value
hsa-miR-215-5p	100.00	565.91 ± 873.79	1.438	3.00E-07	0.0003
hsa-miR-141-3p	100.00	148.99 ± 243.87	1.397	1.75E-06	0.0009
hsa-miR-200a-3p	98.84	29.72 ± 45.27	1.377	7.95E-06	0.0026
hsa-miR-143-3p	100.00	31189.82 ± 14152.42	1.186	1.65E-05	0.0027
hsa-miR-221-3p	100.00	8831.48 ± 2788.77	0.892	1.45E-05	0.0027
hsa-miR-205-5p	100.00	59.06 ± 56.65	1.345	1.42E-05	0.0027
hsa-miR-520a-3p [*]	99.07	87.85 ± 104.45	1.400	2.30E-05	0.0033
hsa-miR-519d-5p [*]	70.37	6.17 ± 7.14	1.529	3.14E-05	0.0035
hsa-miR-429	93.75	13.67 ± 17.37	1.364	2.95E-05	0.0035
hsa-miR-489-3p	33.10	1.44 ± 2.13	1.776	5.26E-05	0.0049
hsa-miR-218-5p	63.43	5.84 ± 14.21	1.679	5.50E-05	0.0049
hsa-miR-483-5p	98.84	36.82 ± 33.10	1.317	7.54E-05	0.0062
hsa-miR-1323 [*]	99.54	147.88 ± 162.88	1.363	8.91E-05	0.0063
hsa-miR-3183	36.34	1.45 ± 2.35	0.609	8.57E-05	0.0063
hsa-miR-516b-5p [*]	98.84	102.28 ± 98.62	1.335	0.0001	0.0098
hsa-miR-582-3p	96.06	20.95 ± 25.59	1.310	0.0002	0.0143
hsa-miR-512-3p [*]	100.00	290.64 ± 385.19	1.332	0.0003	0.0144
hsa-miR-515-5p [*]	83.80	10.57 ± 13.01	1.377	0.0003	0.0144
hsa-miR-4772-5p	83.10	8.16 ± 16.38	1.415	0.0003	0.0144
hsa-miR-582-5p	67.82	5.64 ± 15.35	1.477	0.0003	0.0144
hsa-miR-516a-5p [*]	95.37	31.43 ± 34.78	1.340	0.0003	0.0145
hsa-miR-519c-3p [*]	84.95	11.21 ± 13.04	1.370	0.0003	0.0145
hsa-miR-16-1-3p	59.03	3.01 ± 3.47	1.459	0.0003	0.0145
hsa-miR-10b-5p	100.00	29056.66 ± 22897.46	1.238	0.0004	0.0159
hsa-miR-1283 [*]	97.92	57.65 ± 60.61	1.325	0.0004	0.0164
hsa-miR-877-5p	100.00	1080.68 ± 419.18	0.885	0.0005	0.0174
hsa-miR-375	100.00	1975.18 ± 4693.83	1.327	0.0006	0.0214
hsa-miR-130a-3p	100.00	5555.63 ± 1568.63	0.921	0.0006	0.0219
hsa-let-7b-3p	100.00	60.00 ± 25.79	1.132	0.0007	0.0227
hsa-miR-517a-3p hsa-miR-517b-3p [*]	93.29	20.36 ± 25.26	1.332	0.0007	0.0227
hsa-miR-2116-3p	85.19	6.51 ± 6.14	1.288	0.0007	0.0227
hsa-miR-517-5p [*]	89.81	17.00 ± 19.63	1.338	0.0010	0.0306
hsa-miR-520d-3p [*]	84.95	9.93 ± 11.48	1.363	0.0011	0.0320
hsa-miR-518e-3p [*]	78.94	8.07 ± 9.38	1.341	0.0013	0.0366
hsa-miR-873-5p	96.53	23.57 ± 23.62	1.296	0.0013	0.0367

hsa-miR-518e-5p hsa-miR-519a-5p hsa-miR-519b-5p hsa-miR-519c-5p hsa-miR-522-5p hsa-miR-523-5p*	98.38	44.49 ± 46.68	1.274	0.0014	0.0398
hsa-miR-338-3p	100.00	108.42 ± 36.66	1.096	0.0015	0.0398
hsa-miR-100-5p	100.00	105.34 ± 86.12	1.223	0.0018	0.0460
hsa-miR-524-3p*	55.56	3.49 ± 4.93	1.442	0.0020	0.0496

2 * C19MC miRNAs. A miRNA was considered detected at ≥ 1 raw read count. † Fold changes
 3 represent the change in miRNA abundance at first trimester of pregnancy for each increase of
 4 one ln transformed arbitrary unit of insulin sensitivity estimated using the Matsuda index at
 5 second trimester of pregnancy. Abbreviations: FDR: false discovery rate, p-value: unadjusted p-
 6 value, FDR q-value: p-value adjusted for FDR, SD: standard deviation.

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