

Table SI. Diagnostic criteria for patients with GDM.

Procedure	Glucose cut points <sup>a</sup>		
	Time (h)	mg/dl	mmol/l
50 g	Fasting	≥140	7.8
100 g, 3 h OGTT <sup>b</sup>	Fasting	≥95	5.3
	1	≥180	10.0
	2	≥155	8.6
	3	≥140	7.8
75 g, 2 h OGTT <sup>b</sup>	Fasting	≥92	5.1
	1	≥180	10.0
	2	≥153	8.4

<sup>a</sup>Venous serum or plasma glucose measured at the hospital laboratory; <sup>b</sup>two values meeting or exceeding the cut points are required for diagnosis.

Table SII. Gestational age at the time of sample collection.

Sample collection time	GDM (n=27)	Healthy (n=34)	P-value
Duration of pregnancy at the time of the first evaluation (weeks)	15.1±3.7	15.1±3.0	0.97
Duration of pregnancy at the time of the second evaluation (weeks)	25.4±1.5	26.0±2.0	0.25
Duration of pregnancy at the time of the third evaluation (weeks)	34.7±1.7	34.0±2.2	0.15

GDM, gestational diabetes mellitus.

Table SIII. Mature miRNA sequences (5'-3').

MicroRNA	Mature miRNA sequence	Cat. no. (Thermo Fisher Scientific, Inc.)
hsa-miR-16-5p	UAGCAGCACGUAAAUAUUGGCG	ID 000391
hsa-miR-222-3p	AGCUACAUCUGGCUACUGGGU	ID 002276
hsa-miR-516-5p	AUCUGGAGGUAAGAAGCACUUU	ID 001150
hsa-miR-517-5p	CCUCUAGAUGGAAGCACUGUCU	ID 001113
hsa-miR-518a-5p	CUGCAAAGGGAAGCCCUUUC	ID 002396
U6 snRNA	GTGCTCGCTTCGGCAGCACATATACTAAAATTGG AACGATACAGAGAAGATTAGCATGGCCCCTGCGC AAGGATGACACGCAAATTCGTGAAGCGTTCCATATTTT	ID 001973

Table SIV. Reverse transcription (TaqMan) parameters (reaction volume, 15  $\mu$ l RNA).

Step	Time	Temperature
Hold	10 min	4°C
Hold	30 min	16°C
Hold	30 min	42°C
Hold	5 min	85°C
Hold	$\infty$	4°C

Table SV. Thermal cycling parameters (reaction volume, 10  $\mu$ l cDNA).

Step	Process	Time	Temperature
1	Hold	10 min	95°C
2	Hold	15 sec	95°C
3	Cycle (45 cycles) denature annealing/extension	15 sec 60 sec	95°C 60°C
4	End	$\infty$	4°C

Table SVI. Analysis of signaling pathways related to the study of microRNAs determined in the Kyoto Encyclopedia of Genes and Genomes bioinformatics tool (KEGG).

KEGG signaling pathways	P-value	No. of genes	No. of microRNAs involved
Biosynthesis of fatty acids	<0.00001	2	1
MAPK signaling path	<0.00001	40	3
p53 signaling path	<0.00001	18	3
Prostate cancer	<0.00001	14	1
Pathway in cancer	<0.00001	49	3
PI3K/Akt signaling path	<0.00001	30	1
Wnt signaling path	<0.00001	29	2
Melanoma	<0.00001	12	1
Ubiquitination-mediated proteolysis	0.00012	24	2
Hepatitis B	0.00012	20	2
Endocytosis	0.00014	29	3
Focal adhesion	0.00018	30	3
Nucleotide excision repair	0.00036	2	1
Biosynthesis of glycosaminoglycans - heparan sulfate/heparin	0.001	5	3
Processing of proteins in the endoplasmic reticulum	0.002	15	2
Colorectal cancer	0.003	12	2
Cellular cycle	0.003	15	2
Insulin signaling pathway	0.004	16	1
Neurotrophin signaling pathway	0.004	19	2
Long term depression	0.007	9	1
Hematopoietic cell lineage	0.009	3	1
Pancreatic cancer	0.011	10	1
Endometrial cancer	0.011	11	2
mTOR signaling path	0.016	9	1
Gap junction	0.023	5	1
Glioma	0.025	9	1
Ovocitary meiosis	0.036	12	1
Hypertrophic cardiomyopathy (HCM)	0.036	5	2
AML	0.039	8	1
HTLV-I infection	0.041	19	1
Dilated cardiomyopathy	0.051	5	2
Protein export	0.061	3	1
Viral carcinogenesis	0.069	17	2
HIF-1 signaling path	0.070	11	1
Chronic myeloid leukemia	0.073	9	1
Progesterone-mediated oocyte maturation	0.078	10	1
Shigellosis	0.081	7	1
TGF- $\beta$ signaling path	0.088	9	1
Phosphatidylinositol signaling system	0.092	6	1
Pancreatic secretion	0.15	8	1
Inositol phosphate metabolism	0.15	5	1
Renal cell carcinoma	0.15	7	1
Dopaminergic synapse	0.17	8	1
VEGF signaling path	0.17	7	1
Cytokine-cytokine receptor interaction	0.19	5	1
Lysine degradation	0.21	3	1
Biosynthesis of valine, leucine and isoleucine	0.23	1	1
Glutamnergic synapse	0.26	4	1
Basal transcription factors	0.27	1	1
Type II diabetes mellitus	0.31	6	1
B cell receptor signaling pathway	0.31	7	1
Actin cytoskeleton regulation	0.32	1	1
T cell receptor signaling pathway	0.32	9	1
Metabolism of fatty acids	0.37	1	1
Galactose metabolism	0.38	3	1
Other types of O-glycan biosynthesis	0.38	2	1

Table SVI. Continued.

KEGG signaling pathways	P-value	No. of genes	No. of microRNAs involved
Biosynthesis of glycosaminoglycans - keratan sulfate	0.42	1	1
Glutathione metabolism	0.48	1	1
Diabetes in young individuals	0.54	2	1
RNA transport	0.68	5	1