

Table SI. Clinical information of patients with breast cancer.

Clinical variable	No pCR		pCR		Total	
	n	%	n	%	N	%
All	20	57.1	15	42.9	35	100%.0
Age, years						
≤50	10	50.0	8	53.3	18	51.4
>50	10	50	7	46.7	17	48.6
Clinical stage						
I	2	10.0	0	0.0	2	5.7
II	10	50.0	12	80.0	22	62.9
III and IV	8	40.0	3	20.0	11	31.4
Subtype						
Luminal A	4	20.0	0	0.0	4	11.4
Luminal B	8	40.0	3	20.0	11	31.4
HER2	3	15.0	3	20.0	6	17.2
TNBC	5	25.0	9	60.0	14	40.0
Distant recurrence						
No	13	65.0	15	100.0	28	80.0
Yes	7	35.0	0	0.0	7	20.0
Death						
No	14	70.0	15	100.0	29	82.9
Yes	6	30.0	0	0.0	6	17.1

pCR, pathological complete response.

Table SII. IC₅₀ values of breast cancer cells on drug treatment and IC₅₀ fold change between resistant and wild-type phenotypes.

Drug	Cell line	IC ₅₀ (μmol/ml)	Fold change (resistant/wild-type)
Adriamycin	Wild-type MDA-MB-231	0.414	16.77
	Resistant-type MDA-MB-231	6.943	
	Wild-type MDA-MB-468	0.083	2.37
	Resistant-type MDA-MB-468	0.197	
	Wild-type HCC1395	0.279	10.00
	Resistant-type HCC1395	2.791	
Taxotere	Wild-type MDA-MB-231	41.68	10.25
	Resistant-type MDA-MB-231	427.18	
	Wild-type MDA-MB-468	1.09	4.56
	Resistant-type MDA-MB-468	4.97	
	Wild-type HCC1395	11.57	5.15
	Resistant-type HCC1395	59.63	

IC₅₀, half-maximal inhibitory concentration.

Table SIII. List of differentially expressed miRNAs obtained from microarray analysis.

Only MM231	Only MM468	Only HCC1395		MM231 and HCC1395	MM468 and HCC1395	MM231 and MM468	MM231,MM468 and HCC1395
hsa-miR-891a-5p	hsa-miR-375	hsa-miR-3178	hsa-miR-378d	hsa-miR-4485	hsa-miR-193a-5p	hsa-miR-1246	hsa-miR-146a-5p
hsa-miR-148a-3p	hsa-miR-6747-3p	hsa-miR-1260a	hsa-miR-3937	hsa-miR-4521	hsa-miR-363-3p	hsa-miR-6074	
hsa-miR-183-3p	hsa-miR-1229-3p	hsa-miR-4497	hsa-miR-6086	hsa-miR-222-5p	hsa-miR-7-5p	hsa-miR-3621	
hsa-miR-4668-5p	hsa-miR-27a-5p	hsa-miR-92a-1-5p	hsa-mir-5703	hsa-miR-23a-5p	hsa-miR-4458		
hsa-miR-3605-3p	hsa-miR-3928-3p	hsa-miR-1260b	hsa-miR-3656	hsa-miR-30a-3p	hsa-miR-9-3p		
hsa-miR-5194	hsa-mir-484	hsa-mir-92a-1	hsa-miR-34c-5p	hsa-miR-1202			
hsa-miR-183-5p	hsa-miR-6785-5p	hsa-miR-7977	hsa-miR-4788	hsa-miR-34a-5p			
hsa-miR-4461	hsa-miR-4443	hsa-miR-4286	hsa-miR-1244				
hsa-miR-4673	hsa-miR-149-5p	hsa-miR-6751-5p	hsa-miR-409-5p				
hsa-miR-1973	hsa-miR-1343-3p	hsa-miR-424-3p	hsa-miR-4499				
hsa-miR-138-5p	hsa-miR-29b-1-5p	hsa-miR-297	hsa-miR-4743-5p				
hsa-miR-486-5p	hsa-miR-148a-5p	hsa-miR-378e	hsa-miR-6802-5p				
hsa-miR-4793-3p	hsa-miR-484	hsa-miR-5100	hsa-miR-126-3p				
hsa-miR-182-5p	hsa-miR-608	hsa-miR-25-5p	hsa-miR-4532				
hsa-miR-6723-5p	hsa-miR-4484	hsa-miR-30c-2-3p	hsa-miR-2276-3p				
hsa-miR-188-5p	hsa-miR-663a	hsa-miR-193b-5p	hsa-miR-941				
hsa-miR-6789-5p	hsa-miR-3651	hsa-miR-378a-3p	hsa-miR-328-3p				
hsa-miR-4487	hsa-miR-3064-5p	hsa-miR-378c	hsa-miR-4530				
hsa-miR-6796-5p	hsa-miR-7110-5p	hsa-miR-3195	hsa-miR-1225-5p				
hsa-miR-342-3p	hsa-miR-664b-3p	hsa-miR-4717-3p	hsa-miR-6840-3p				
hsa-miR-210-3p	hsa-miR-4422	hsa-miR-30e-3p	hsa-miR-212-5p				
hsa-miR-196a-5p	hsa-miR-3175	hsa-miR-4454	hsa-miR-3138				
hsa-miR-4741		hsa-miR-935	hsa-miR-203a				
hsa-miR-1269b		hsa-miR-505-3p	hsa-miR-195-5p				
hsa-miR-362-5p		hsa-miR-127-3p	hsa-miR-4322				
hsa-miR-200a-3p		hsa-miR-497-5p	hsa-miR-146b-5p				
hsa-miR-200b-3p		hsa-miR-495-3p	hsa-miR-134-5p				
hsa-miR-6132		hsa-miR-3065-5p	hsa-miR-376c-3p				
hsa-miR-200b-5p		hsa-miR-3617-5p	hsa-miR-212-3p				
hsa-miR-767-5p		hsa-miR-4726-5p	hsa-miR-376a-3p				
hsa-miR-6782-5p		hsa-miR-152-3p	hsa-miR-3689a-5p				

hsa-miR-485-3p	hsa-miR-3689b-5p
hsa-miR-382-5p	hsa-miR-3689e
hsa-miR-433-3p	hsa-miR-505-5p
hsa-miR-543	hsa-miR-379-5p
hsa-miR-431-5p	hsa-miR-200c-3p
hsa-miR-487b-3p	hsa-miR-409-3p
hsa-miR-432-5p	

Table SIV. Raw Cq values of miRNAs in patients with tumor-derived exosomes and breast cancer who underwent neoadjuvant chemotherapy.

no pCR	Pt 1	Pt 2	Pt 3	Pt 4	Pt 5	Pt 6	Pt 7	Pt 8	Pt 9	Pt 10	Pt 11	Pt 12	Pt 13	Pt 14	Pt 15
miR-16	23.11	24.91	22.80	21.32	23.31	24.65	24.25	23.43	21.84	25.11	24.17	24.82	22.62	25.37	23.20
miR-16	22.71	24.82	22.74	21.37	23.40	24.29	24.54	23.43	21.45	25.09	24.28	24.81	22.90	25.10	22.78
miR-21	25.64	24.00	24.18	22.01	24.83	25.61	25.53	25.46	25.98	27.22	27.21	25.28	24.27	28.12	23.60
miR-21	25.27	24.23	24.26	22.15	25.04	25.76	26.06	25.76	25.70	27.14	27.27	25.24	24.12	27.88	23.42
miR-122	33.28	32.44	31.59	29.40	27.53	33.55	31.56	29.90	30.51	31.59	30.05	30.48	28.60	31.34	30.68
miR-122	33.01	32.05	31.12	29.78	27.78	33.03	32.18	29.39	30.18	31.16	30.06	30.74	28.87	31.85	31.32
miR-125b	32.64	31.48	30.62	30.16	31.77	32.39	32.44	32.09	32.13	34.70	32.66	31.12	31.63	33.07	31.42
miR-125b	32.23	31.91	31.28	30.33	31.95	32.85	33.00	32.34	32.24	34.34	32.32	31.57	31.73	33.06	31.22
miR-146a	26.16	25.00	25.83	23.14	25.24	27.08	26.95	26.26	25.44	27.79	26.06	26.82	25.60	28.42	24.75
miR-146a	26.06	25.38	25.86	23.16	25.59	26.90	27.13	26.43	24.41	28.17	26.23	26.94	25.67	28.21	24.81
miR-148a	40.00	35.39	38.77	33.52	40.00	40.00	38.65	38.80	40.00	40.00	40.00	40.00	39.33	40.00	40.00
miR-148a	40.00	34.98	39.38	32.98	40.00	40.00	39.33	39.40	40.00	40.00	40.00	40.00	38.66	40.00	40.00
miR-155	33.24	31.61	29.49	30.33	35.75	33.73	32.60	32.24	33.74	35.68	33.68	31.64	32.47	35.15	31.68
miR-155	32.08	31.52	29.82	30.59	34.53	33.33	35.02	33.16	33.06	35.62	33.20	32.20	33.49	35.59	30.88
miR-210	33.04	30.45	31.50	29.52	32.02	31.59	32.27	32.35	32.12	32.99	32.53	31.11	30.43	33.64	30.27
miR-210	32.54	30.48	31.07	30.12	31.49	32.05	31.68	32.60	32.60	33.55	32.46	31.06	30.67	32.91	30.06
miR-222	38.00	36.26	35.49	36.04	33.88	37.93	36.82	35.70	36.31	35.63	36.53	34.79	36.68	35.50	36.51
miR-222	37.13	36.86	34.99	36.25	33.47	37.24	36.36	35.08	36.76	35.08	36.44	35.08	37.84	35.08	36.89
miR-484	27.26	26.56	26.41	26.71	27.16	28.05	27.48	25.97	26.73	29.50	28.19	26.45	26.60	29.98	26.04
miR-484	27.15	27.26	26.49	26.85	26.85	28.43	28.12	26.15	26.39	29.49	28.08	26.45	26.90	29.93	26.07
miR-501	33.47	33.91	34.46	31.83	34.91	34.62	34.63	40.00	32.49	34.52	33.83	33.31	34.15	38.47	33.37
miR-501	33.04	34.07	33.78	32.50	34.17	35.08	34.23	40.00	32.05	35.20	34.13	33.91	34.19	38.02	32.96
miR-1246	22.11	22.22	20.38	23.12	22.55	22.39	21.46	21.51	22.19	22.26	22.07	21.10	22.25	21.99	23.60
miR-1246	22.20	22.18	20.27	23.15	22.91	22.55	21.49	21.77	22.03	22.39	22.09	21.25	22.28	21.91	23.61
miR-1260b	31.72	29.50	30.05	30.89	30.23	31.73	31.07	30.20	32.04	32.17	32.17	31.66	30.52	32.82	30.07
miR-1260b	31.15	29.35	29.90	31.16	30.63	32.01	30.73	30.90	32.07	32.41	31.33	31.26	31.14	32.71	29.88
pCR	Pt 1	Pt 2	Pt 3	Pt 4	Pt 5	Pt 6	Pt 7	Pt 8	Pt 9	Pt 10	Pt 11	Pt 12	Pt 13	Pt 14	Pt 15
miR-16	21.51	23.47	24.09	21.44	20.91	23.01	20.90	20.63	23.30	24.69	21.57	20.68	20.95	23.12	21.99

miR-16	21.89	23.53	24.12	21.52	21.01	22.83	21.74	20.84	23.62	24.19	21.90	20.24	21.11	22.93	21.69
miR-21	24.02	25.80	26.83	24.25	24.07	25.14	24.61	23.98	26.40	28.02	24.53	24.66	24.71	23.94	24.13
miR-21	23.74	25.04	26.87	24.26	24.38	25.48	24.57	24.32	25.72	28.10	24.91	24.60	24.74	23.74	23.55
miR-122	29.09	30.54	31.13	25.98	25.86	29.48	27.40	28.19	32.65	36.84	29.81	30.55	32.90	30.71	29.36
miR-122	28.97	31.76	31.00	26.08	25.69	29.29	27.41	28.30	32.68	34.62	29.90	31.22	32.35	31.09	29.33
miR-125b	32.47	32.31	32.67	31.27	30.30	33.59	31.19	31.20	32.88	36.59	32.56	32.67	33.40	33.78	33.69
miR-125b	30.21	32.20	33.46	32.00	30.45	33.05	31.09	31.66	32.74	36.47	33.17	33.42	33.04	34.02	32.85
miR-146a	24.22	25.65	27.22	24.56	24.44	26.61	24.04	24.06	26.50	29.69	25.82	24.89	25.48	27.53	27.37
miR-146a	24.41	26.45	27.35	24.47	24.56	26.51	24.33	23.92	26.97	29.55	26.03	24.85	25.42	27.32	27.45
miR-148a	34.09	35.92	38.61	37.60	35.32	35.27	37.59	36.41	40.00	40.00	32.08	32.93	40.00	36.27	40.00
miR-148a	34.56	38.51	37.22	35.20	37.22	35.32	36.38	37.22	40.00	40.00	34.02	32.33	40.00	36.14	40.00
miR-155	31.74	32.76	34.84	31.60	33.21	32.00	33.56	32.99	33.44	32.64	31.74	34.09	33.36	34.15	32.89
miR-155	32.13	32.52	34.27	32.05	32.60	32.26	32.51	32.17	32.81	36.88	31.38	33.05	34.65	33.42	32.75
miR-210	29.12	29.90	31.27	29.28	29.58	30.52	30.37	29.73	31.59	33.03	29.37	27.68	29.17	31.99	32.08
miR-210	29.06	29.87	30.95	29.34	29.74	31.12	29.77	29.76	31.78	32.06	28.48	27.66	28.64	31.24	30.43
miR-222	36.83	39.62	36.78	40.00	40.00	39.71	40.00	38.74	39.33	40.00	39.21	38.62	40.00	37.90	40.00
miR-222	37.02	38.89	37.21	40.00	40.00	39.41	40.00	38.99	39.66	40.00	39.56	38.11	40.00	37.28	40.00
miR-484	25.48	26.63	28.27	26.25	26.21	26.66	25.60	25.62	27.53	30.06	27.17	27.07	27.26	29.00	28.74
miR-484	25.72	26.60	28.36	26.23	26.21	26.79	25.54	25.58	27.50	30.25	27.10	27.04	27.28	28.80	28.87
miR-501	34.03	35.09	34.24	31.96	36.26	35.15	34.19	32.67	34.00	34.02	34.94	35.51	34.36	38.50	34.86
miR-501	34.68	34.57	34.06	32.36	37.03	34.10	34.01	33.12	33.94	35.70	34.82	35.90	34.88	37.85	34.79
miR-1246	23.15	23.32	21.82	21.39	20.31	22.19	23.08	21.97	22.54	23.72	23.72	22.76	25.18	23.98	25.22
miR-1246	23.33	23.40	21.87	21.81	20.45	22.30	23.27	22.10	22.65	23.94	23.59	23.01	25.18	24.19	25.36
miR-1260b	29.65	32.89	32.25	28.71	29.81	31.64	29.98	29.96	31.60	34.89	31.80	30.44	30.80	32.29	33.04
miR-1260b	29.61	30.87	32.65	28.61	29.60	31.21	29.97	29.77	31.72	34.20	31.59	30.40	30.43	33.05	34.20

miRNA or miR, microRNA; pCR, pathological complete response

Table SV. Discriminatory power of highly, moderately- and poorly-related miRNAs with drug resistance.

Class	Variable	AUC	SE	95% CI
High	miR-146a-5p	0.898	0.051	0.749-0.974
	miR-125b-5p	0.883	0.055	0.730-0.967
	miR-1246b-5p	0.830	0.068	0.665-0.935
	miR-1260b	0.820	0.077	0.654-0.929
	miR-484	0.817	0.072	0.650-0.927
Moderate	miR-501	0.757	0.085	0.582-0.885
	miR-21-5p	0.752	0.0851	0.577-0.882
	miR-155	0.700	0.0895	0.522-0.843
	miR222-5p	0.677	0.0843	0.519-0.830
Poor	miR-148a-5p	0.595	0.103	0.416-0.757
	miR-122-5p	0.593	0.102	0.415-0.756
	miR-210	0.510	0.103	0.336-0.682

miRNA or miR, microRNA; AUC, area under the curve; SE, AUC standard error; CI, confidence interval.

Table SVI. List of miRNA marker combinations.

No.	Combination	Marker 1	Marker 2	Marker 3	Marker 4	Marker 5
1	-	miR-125b				
2	-	miR-146a				
3	-	miR-484				
4	-	miR-1246				
5	-	miR-1260b				
6	Combi 1	miR-125b	miR-146a			
7	Combi 2	miR-125b	miR-484			
8	Combi 3	miR-125b	miR-1246			
9	Combi 4	miR-125b	miR-1260b			
10	Combi 5	miR-146a	miR-484			
11	Combi 6	miR-146a	miR-1246			
12	Combi 7	miR-146a	miR-1260b			
13	Combi 8	miR-484	miR-1246			
14	Combi 9	miR-484	miR-1260b			
15	Combi 10	miR-1246	miR-1260b			
16	Combi 11	miR-125b	miR-146a	miR-484		
17	Combi 12	miR-125b	miR-146a	miR-1246		
18	Combi 13	miR-125b	miR-146a	miR-1260b		
19	Combi 14	miR-125b	miR-484	miR-1246		
20	Combi 15	miR-125b	miR-484	miR-1260b		
21	Combi 16	miR-125b	miR-1246	miR-1260b		
22	Combi 17	miR-146a	miR-484	miR-1246		
23	Combi 18	miR-146a	miR-484	miR-1260b		
24	Combi 19	miR-484	miR-1246	miR-1260b		
25	Combi 20	miR-125b	miR-146a	miR-484	miR-1246	
26	Combi 21	miR-125b	miR-146a	miR-484	miR-1260b	
27	Combi 22	miR-146a	miR-484	miR-1246	miR-1260b	
28	Combi 23	miR-125b	miR-146a	miR-484	miR-1246	miR-1260b

miRNA or miR, microRNA.

Table SVII. Discriminatory power of each microRNAcombination.

Variable	AUC	SE	95% CI
Combi_1	0.937	0.0373	0.800-0.991
Combi_2	0.897	0.0514	0.747-0.974
Combi_3	0.897	0.0511	0.747-0.974
Combi_4	0.903	0.0499	0.755-0.977
Combi_5	0.903	0.0498	0.755-0.977
Combi_6	0.95	0.0318	0.819-0.995
Combi_7	0.95	0.0318	0.819-0.995
Combi_8	0.853	0.0635	0.693-0.950
Combi_9	0.863	0.0626	0.705-0.956
Combi_10	0.85	0.0693	0.689-0.948
Combi_11	0.933	0.0384	0.795-0.990
Combi_12	0.95	0.0318	0.819-0.995
Combi_13	0.933	0.0396	0.795-0.990
Combi_14	0.907	0.0488	0.759-0.978
Combi_15	0.907	0.0488	0.759-0.978
Combi_16	0.903	0.0494	0.755-0.977
Combi_17	0.91	0.047	0.764-0.980
Combi_18	0.91	0.047	0.764-0.980
Combi_19	0.867	0.0625	0.709-0.957
Combi_20	0.943	0.0347	0.809-0.993
Combi_21	0.933	0.0396	0.795-0.990
Combi_22	0.95	0.0318	0.819-0.995
Combi_23	0.95	0.0318	0.819-0.995

miRNA or miR, microRNA; AUC, area under the curve; SE, AUC standard error; CI, confidence interval.

Table SVIII. Discriminatory power of miRNA markers and 5-miRNA signature.

Variable	AUC	SE	95% CI
miR-125b-5p	0.883	0.055	0.730-0.967
miR-146a-5p	0.898	0.051	0.749-0.974
miR-484	0.817	0.072	0.650-0.927
miR-1246	0.830	0.068	0.665-0.935
miR-1260b	0.820	0.077	0.654-0.929
5-miRNA signature	0.950	0.032	0.819-0.995

miRNA or miR, microRNA; AUC, area under the curve; SE, AUC standard error; CI, confidence interval.

Table SIX. Target genes of nine candidate miRNAs with binding scores >90.

GeneList miR-21-5p	GeneList miR-155-5p	GeneList miR-501-5p	GeneList miR-222-5p	GeneList miR-1246	GeneList miR- 146a-5p	GeneList miR-484	GeneList miR-125b-5p	GeneList miR-1260b
YOD1	ZNF652	PEX12	GNA12	FAM53C	TRAF6	MAGI1	STARD13	ZNF268
PRDM11	ZIC3	NEXMIF	RAP2A	C12orf71	IRAK1	TNRC6C	FREM1	ZNF763
FASLG	BACH1	RIPK2	CELSR2	LENEP	SEC23IP	HXA5	PPP4R3A	ZNF302
ZNF367	JARID2	KLHDC1	ITGA3	GLRB	NOVA1	PTPRE	BMF	GDI1
VCL	KDM5B	RDX	ADAMTSL3	FPGT	PPP1R11	ACVR1B	GCNT1	CTAGE1
SKP2	ZNF98	ALX1	SDC2	CREBL2	UPP2	RHOBTB1	SH3TC2	ATF6B
TGFB1	TBR1	JMY	ARL6IP6	QTRT2	WWC2	PTGER4	ZNF704	AGO1
PLAG1	IRF2BP2	ADRA2B	PTPN3	SLC12A2	BCORL1	HK2	ARID3B	ZNF426
IL12A	OLFML3	PAN3	PAWR	PLEKHB2	ZNF649	MAP2	IER3IP1	SEMA3A
CREBRF	MPEG1	LPAR1	GUCY1A2	RTKN2	SORT1	MGAT5	BLZF1	FAM237A
RAB6D	CDX1	VPS13A	LRP2	ANTXR2	NUMB	COLQ	NUP210	ZNF384
KRIT1	ACTL7A	LPIN1	CD2AP	SCN3A	USP32	CREB3L3	BAK1	NEXMIF
PELI1	MARCH1	MYLK	HS3ST5	ZNF425	PLSCR4	TGFB3	ACHE	CAP1
RBPJ	FOS	KLF12	GIMAP2	MRPS14	CARD10	RETREG1	TMEM135	ZNF189
RALGPS2	IKBIP	JUN	SEC62	HECTD2	SRSF6	SNN	NIPAL4	ZNF367
ADGRG2	CHAF1A	UBE3A	GCNT1	ANKDD1B	APPL1	SPDYA	NBEAL2	KCNIP1
GATAD2B	VAV3	AIMP1	SH3GLB1		ZNF652	MED8	IRF4	CLRN1
PBRM1	TSHZ3	PLP1	SCD		SIAH2	DPYSL2	KCNK10	ZNF594
SCML2	GABARAPL1	BBS7	EVI5		GDAP1L1	AVL9	KCNS3	PTBP2
RSAD2	GYG1	STEAP2	C17orf100		SLC10A3	IGBP1	DOCK3	ZNF37A
PPP1R3B	KANSL1	EIF3M	AHNAK		MRS2	CSRNP2	KLF13	ZNF584
PLEKHA1	MYBL1	PLXNB1	SLC7A13		ZNF354B	PKNOX1	CGN	UBTD2
FGF18	TP53INP1	HDAC9	BCLAF1		C9orf72	ANAPC7	RORA	TARDBP
SPRY1	RGP1	PCOLCE2	RB1		EIF4G2	REV1	PI4K2B	ZNF559
FAM13A	LSM14A	SLC35D3	PRKX		ZNF540	NDST3	TTPA	XKR7
GPATCH2L	TWF1	ARMC4	DDX58		GRIA3	VKORC1	KCTD15	UBQLN4
STAT3	TRAM1	KRR1	G3BP2		LOC388813	ZSWIM6	CYP24A1	PDXK
BCL7A	DPY19L1	MMP13	UBE2J1		DDHD1	TNR	ZSCAN29	ZFYVE9
SKI	CARD11	CACHD1	NCOA1		BRK1	DCBLD2	ZNF543	ZFP90
YAP1	LCORL	DRAM2	ATAD1		TDRKH	XPO4	JADE2	BRK1
MALT1	E2F2	FUT9	CEP85L		ZBTB2	TBCD	ZSWIM6	SMAP2
ZBTB41	RPS6KA3	PNN	CCDC88A		CD80	JPT1	NPL	U2SURP
KLF3	TRIM32	NLRP11	ADAMTS3		FBXW2	KCNJ14	SBNO1	LARP1B
MBNL3	G2E3	DYNC112	PCDH17		POFUT2		ENPEP	ZNF439
CCL1	MIDN	TEKT3	PAK4		NEMP1		NECAB3	UFM1
NKIRAS1	ASAP2	BLID	GALNT7		DCAF12		KIAA1841	SPEN
TIAM1	MYB	NFIL3	ANKRD17		CXXC4		MTF1	FAM120C
OSR1	TLE4	NPR3	ITPK1				OSBPL9	KLHL32
PAN3	CSRNP2	TFAM	ZBTB43				DUS1L	ZNF629
KDM7A	VMA21	SSR3	ZHX1- C8orf76				VPS4B	RXRA
CASKIN1	WEE1	H2AFX	CNR1				ANAPC16	GLP1R
PDCD4	HIVEP2	PRDX3	RALGPS2				LIPA	FASTKD1
GID4	ZNF236	ZFYVE9	CALD1				SSTR3	

HSD17B4	CSNK1G2	SH2B3	PHYHIP1L	ETS1
MAP3K1	SMAD2	C5orf15	STAU1	PRTG
PDZD2	ZMYM2	SNRPF	LYRM2	CDH5
UBE2D3	ARID2	CHST9	SINHCAF	SLC37A2
AKAP12	DET1	KIAA0825	ANKRD44	RBM20
CPEB3	ZNF492	SSX2IP	GOLIM4	SEMA4B
RECK	C2orf80	MAGEB6	NDUFB6	MORC2
CCL20	UBQLN1	COMMD3-BMI1	PPP2R5E	SLC35A4
PPP1R3A	ATXN1L	ATP5MC3	UQCRB	ATXN1
NTF3	MED13L	ENGASE	SLC12A6	SLC39A9
TIMP3	ZNF860	TAC3	NR2E3	RAPGEF5
ANGPTL5	ZC2HC1B	IRF2BPL	LRRTM2	LACTB
BCL11B	TRAF3	DCDC2	C9orf40	ATP10D
JAG1	ZBTB41		PSG1	C19orf38
FAM3C	DYNC1I1		NUFIP2	BAP1
MEI4	SGK3		NECTIN2	ABHD6
EPM2A	CSF1R		SLC39A10	MAPRE2
SLC30A10	MITF		BCAR3	SEL1L
BTG2	SEMA5A			KCNIP3
SYT15	MED21			UCK2
MPRIIP	UNC80			SYDE2
NFIA	SPRTN			PPIL2
KLHL15	PALD1			VTCN1
CFAP300	PLEKHA1			TMEM168
GLCCI1	RICTOR			PDZD3
SPRY2	KLHL4			DHX33
LRRC57	MAP3K7			OLFML2A

miRNA or miR,microRNA.