

Supplemental Information

Tables

Table S1. Primer sequences used in this study

Gene	Species	Forward Primer (5'-3')	Reverse Primer (5'-3')
<i>NOVA1</i>	Human	AATGTGGCCAAGACAGAACC	TGGGATCAGATGGAGAGGAC
<i>GRIN3A</i>	Human	CTGCTGCTACCACGAATCAA	TTGGTCTTGAAATGCTGCTG
<i>VIM</i>	Human	GAGAACTTTGCCGTTGAAGC	TCCAGCAGCTTCCTGTAGGT

Table S2: Gene targets of miR-128 and miR-378 (NGS data)

Gene name	Target of	Log fold change	P-value	Adj.p-value	Total reads
<i>ABCA1</i>	miR-128	-0.26	4.95E-14	3.13E-13	11497
<i>ABCC5</i>	miR-128	-0.04	0.11	0.18	22135
<i>ABCG1</i>	miR-378	-0.19	0.0013	0.0031	2861
<i>AHI1</i>	miR-378	-0.07	0.17	0.24	4842
<i>AKT3</i>	miR-378	-0.25	1.37E-26	1.64E-25	34790
<i>ALCAM</i>	miR-378	-0.24	3.13E-23	3.23E-22	28549
<i>ANO1</i>	miR-378	-0.48	1.24E-06	4.35E-06	879
<i>ARID5B</i>	miR-378	-0.32	7.29E-29	9.36E-28	11847
<i>BAG2</i>	miR-128	-0.30	2.26E-11	1.19E-10	4616
<i>BAX</i>	miR-128	-0.06	0.07	0.11	12146
<i>BAZ2B</i>	miR-128	-0.38	1.71E-56	5.39E-55	21602
<i>BICD1</i>	miR-378	-0.23	6.88E-15	4.59E-14	14212
<i>BMI1</i>	miR-128	-0.47	2.24E-05	6.86E-05	710
<i>BRAF</i>	miR-378	0.00	0.97	0.99	3118
<i>C11orf49</i>	miR-378	-0.09	0.0071	0.015	10066
<i>C1orf144</i>	miR-128	-0.33	1.64E-36	2.8E-35	23098
<i>CELSR3</i>	miR-378	-0.08	0.0014	0.0033	40623
<i>CITED2</i>	miR-128	-0.56	1.9E-106	1.7E-104	18849
<i>CNTN5</i>	miR-378	-0.65	4.67E-13	2.77E-12	1049
<i>DCX</i>	miR-128	-0.50	1.8E-206	6.1E-204	174609
<i>DOCK2</i>	miR-378	-0.41	4.48E-09	1.98E-08	1672
<i>E2F5</i>	miR-128	-0.20	3.63E-09	1.61E-08	6612
<i>EHD1</i>	miR-378	-0.33	2.39E-47	5.73E-46	34446
<i>EIF4G3</i>	miR-378	-0.12	9.61E-07	3.39E-06	23263
<i>ELAC1</i>	miR-378	-0.13	0.08	0.13	1847
<i>EPHB1</i>	miR-128	-0.16	1.1E-08	4.68E-08	12967

<i>EPHB2</i>	miR-128	-0.15	9.85E-09	4.2E-08	15470
<i>ERBB2</i>	miR-378	-0.28	3.16E-24	3.39E-23	12873
<i>FAM184A</i>	miR-128	-0.15	0.0029	0.0066	3300
<i>FOXG1</i>	miR-378	-0.44	0.00014	0.00039	625
<i>FUS</i>	miR-378	-0.35	1.02E-60	3.64E-59	54658
<i>GLS</i>	miR-378	-0.32	1.28E-41	2.56E-40	29835
<i>GLTP</i>	miR-128	-0.01	0.78	0.84	6249
<i>GRB2</i>	miR-378	-0.14	1.45E-09	6.66E-09	32348
<i>GRIN3A</i>	miR-378	-0.50	1.65E-17	1.29E-16	2441
<i>H3F3B</i>	miR-128	-0.19	1.01E-21	9.68E-21	53268
<i>HCLS1</i>	miR-378	-0.80	0.0011	0.0027	133
<i>HSPB1</i>	miR-128	-0.13	2.19E-07	8.27E-07	22295
<i>IGF1R</i>	miR-378	-0.54	1.11E-93	8.19E-92	51247
<i>IRS1</i>	miR-128	-0.28	1.91E-24	2.07E-23	26615
<i>ISL1</i>	miR-128	-0.50	0.00091	0.0023	367
<i>KBTBD7</i>	miR-378	-0.35	4.24E-09	1.87E-08	2434
<i>KIAA1522</i>	miR-378	-0.03	0.19	0.27	30641
<i>KLF4</i>	miR-128	-0.06	0.55	0.65	888
<i>LIPE</i>	miR-378	-0.05	0.64	0.73	674
<i>MAPK6</i>	miR-128	-0.10	3.13E-06	1.05E-05	54650
<i>MARK1</i>	miR-378	-0.10	0.00062	0.0016	11194
<i>MED13</i>	miR-378	-0.32	8.22E-27	9.86E-26	18068
<i>NAP1L2</i>	miR-128	-0.24	6.82E-10	3.23E-09	7151
<i>NF1</i>	miR-128 and miR-378	-0.09	0.0026	0.0060	17616
<i>NHS</i>	miR-128	0.00	0.93	0.97	5647
<i>NIPBL</i>	miR-128	-0.24	1.46E-15	1.01E-14	12899
<i>NKX3-1</i>	miR-378	-0.28	0.0020	0.0048	1012
<i>NOVA1</i>	miR-128	-0.89	3.8E-249	2E-246	15708
<i>NRF1</i>	miR-378	-0.18	0.00017	0.00047	3798
<i>NTNG1</i>	miR-128	-0.49	1.65E-29	2.19E-28	4409

<i>PAFAH1B2</i>	miR-378	-0.06	0.023	0.044	20726
<i>PAIP2</i>	miR-128	-0.15	8.33E-09	3.58E-08	17979
<i>PDE3A</i>	miR-128	-0.32	3.71E-14	2.37E-13	5834
<i>PDLIM1</i>	miR-128	-0.28	9.31E-22	8.93E-21	14205
<i>PGR</i>	miR-378	-0.43	0.0070	0.015	323
<i>PHF6</i>	miR-128	-0.06	0.034	0.062	12906
<i>PLIN1</i>	miR-378	-0.31	0.099	0.16	231
<i>PNPLA2</i>	miR-378	-0.50	1.54E-37	2.74E-36	7538
<i>PRTFDC1</i>	miR-378	-0.15	0.0041	0.0091	3641
<i>PTEN</i>	miR-128	-0.12	0.0022	0.0050	6414
<i>RANBP10</i>	miR-378	-0.17	1.59E-06	5.51E-06	7743
<i>RAP1B</i>	miR-128	-0.01	0.83	0.88	3904
<i>RBX1</i>	miR-378	-0.29	7.77E-10	3.66E-09	4590
<i>RCOR3</i>	miR-128	-0.26	2.92E-24	3.14E-23	16676
<i>RND3</i>	miR-128	-0.05	0.030	0.056	39322
<i>RPN2</i>	miR-378	-0.11	1.13E-07	4.39E-07	48975
<i>RPS6KA5</i>	miR-128	-0.21	0.017	0.033	1168
<i>RPS6KB1</i>	miR-128	-0.20	5.46E-05	0.00016	4273
<i>SEC23IP</i>	miR-378	-0.04	0.24	0.34	11033
<i>SMAP1</i>	miR-128	-0.04	0.16	0.24	8451
<i>SMARCA1</i>	miR-378	-0.08	0.0010	0.0025	22445
<i>SS18</i>	miR-128	-0.22	4.28E-09	1.89E-08	6189
<i>SYT1</i>	miR-128	-0.11	3.89E-06	1.3E-05	27741
<i>TBC1D9B</i>	miR-128	-0.18	3.27E-13	1.96E-12	24081
<i>TMTC2</i>	miR-128	-0.29	1.76E-17	1.37E-16	8635
<i>TPM1</i>	miR-128	-0.69	4.8E-237	2.3E-234	114824
<i>TRIL</i>	miR-128	-0.27	0.00017	0.00048	1649
<i>TROVE2</i>	miR-128	-0.10	0.020	0.038	7081
<i>UBE2N</i>	miR-128	-0.03	0.18	0.27	20298
<i>UNC13C</i>	miR-378	-0.40	0.0091	0.019	357

<i>USP9Y</i>	miR-378	-0.15	1.04E-05	3.32E-05	11123
<i>VEGFC</i>	miR-128	-0.05	0.71	0.78	434
<i>VIM</i>	miR-378	-0.33	3.9E-212	1.4E-209	435212
<i>WTAP</i>	miR-128	-0.13	5.45E-05	0.00016	8416

Figures

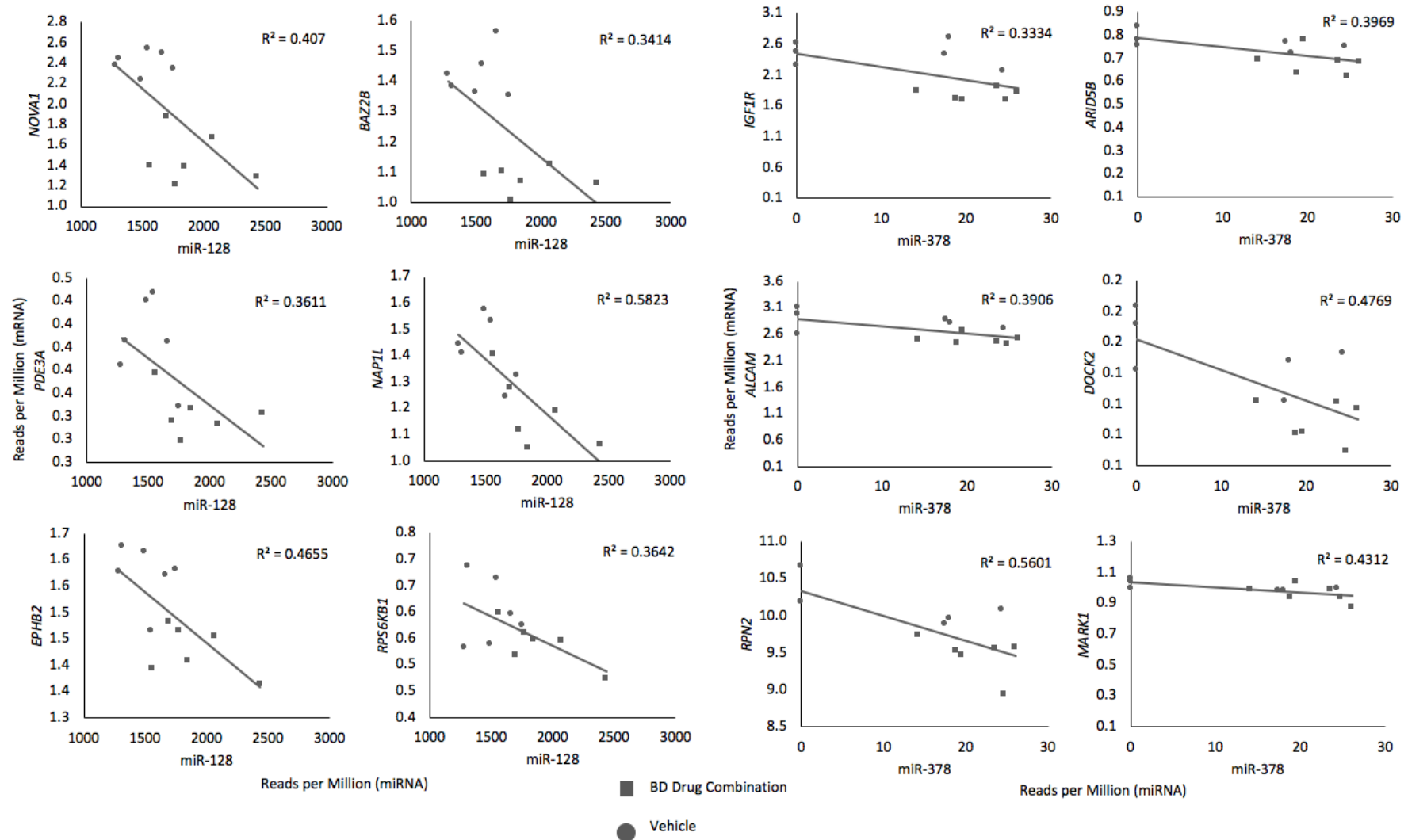


Figure S1. Negative correlation between the miRNAs and their target genes expression in each BD drug treated NT2-N sample (n=6 per treatment group). miR-128 (a), miR-378 (b) ($p < 0.05$ for all genes)

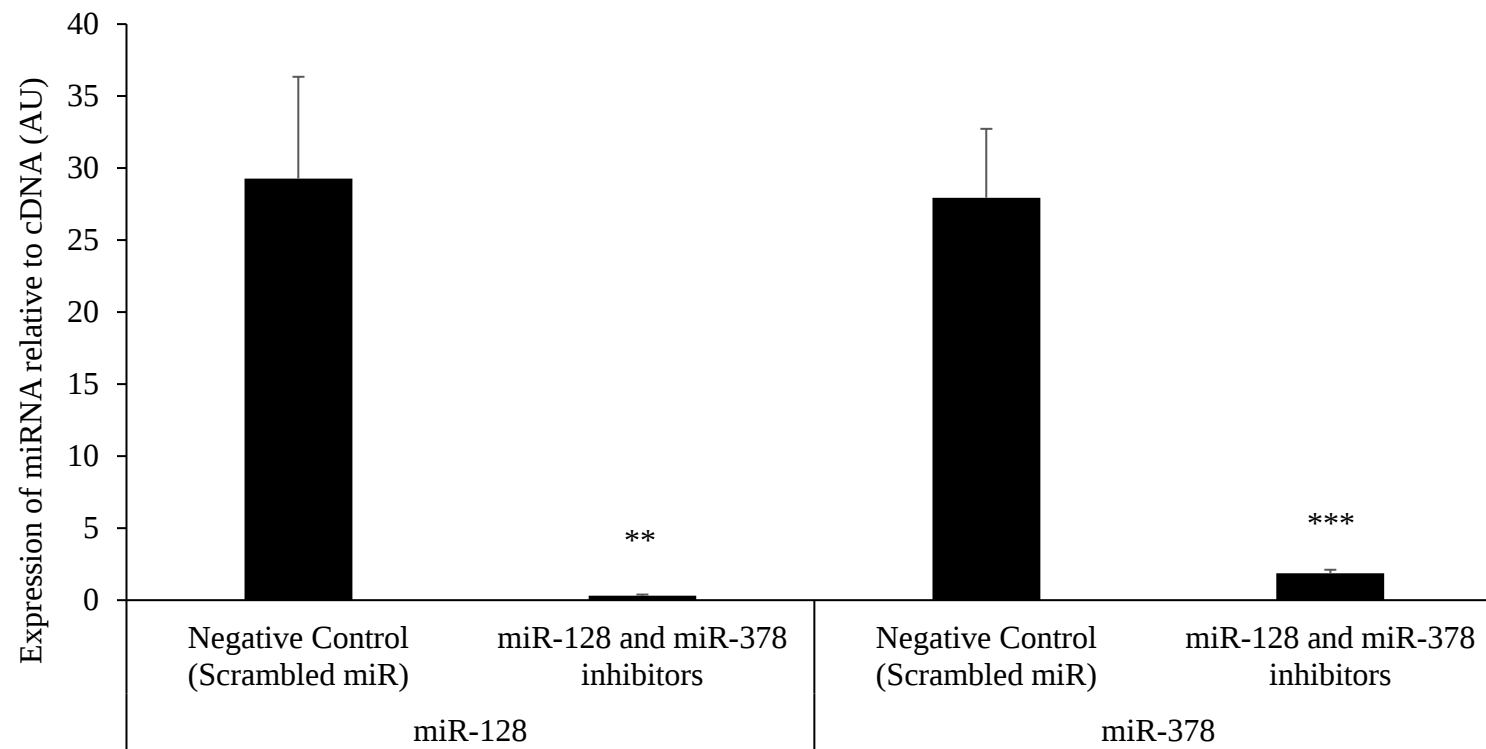


Figure S2. Successful inhibition of miR-128 and miR-378 in NT2-N cells. ** $p < 0.01$, *** $p < 0.001$