

Supplementary Table 2.

List of deregulated mature miRNAs in *FTO* knockdown cells. We detected 249 miRNAs with significantly increased levels (>1.5-fold change) (a) and 35 miRNAs with significantly decreased levels (b). Means and standard deviations of three compared pairs of scrambled and *FTO* specific siRNA treated cells are given.

a. Upregulated miRNAs in *FTO* deficient cells.

	Feature	Mean	SD
1	hsa-miR-6505-5p	9.83	4.61
2	hsa-miR-651-5p	6.49	1.61
3	hsa-miR-493-5p	3.99	0.98
4	hsa-miR-6739-3p	3.84	1.03
5	hsa-miR-221-3p	2.79	0.40
6	hsa-miR-4492	2.62	0.43
7	hsa-miR-5589-5p	2.62	0.51
8	hsa-miR-1245b-5p	2.53	0.51
9	hsa-miR-6763-5p	2.42	0.27
10	hsa-miR-1246	2.41	0.49
11	hsa-miR-23c	2.37	0.23
12	hsa-miR-4489	2.34	0.97
13	hsa-let-7b-5p	2.31	0.17
14	hsa-miR-6869-5p	2.30	0.80
15	hsa-miR-7161-5p	2.29	0.98
16	hsa-miR-3681-5p	2.28	0.36
17	hsa-miR-1324	2.27	0.09
18	hsa-miR-663a	2.18	0.50
19	hsa-miR-30a-3p	2.17	0.15
20	hsa-miR-6795-3p	2.16	0.67
21	hsa-miR-4664-5p	2.15	0.69
22	hsa-miR-6506-5p	2.13	0.32
23	hsa-miR-1258	2.11	0.44
24	hsa-miR-5787	2.11	0.32
25	hsa-miR-6758-5p	2.11	0.23
26	hsa-miR-127-5p	2.10	0.67
27	hsa-miR-5682	2.09	0.20
28	hsa-miR-6513-3p	2.07	0.54
29	hsa-miR-1257	2.04	0.25
30	hsa-miR-646	2.03	0.68
31	hsa-miR-635	2.02	0.44
32	hsa-miR-302a-5p	2.02	0.03
33	hsa-miR-6090	2.02	0.47

34	hsa-miR-3616-3p	2.01	0.43
35	hsa-miR-4502	1.99	0.38
36	hsa-miR-580-3p	1.99	0.13
37	hsa-miR-573	1.98	0.06
38	hsa-miR-4763-3p	1.98	0.18
39	hsa-miR-144-3p	1.97	0.43
40	hsa-miR-3609	1.97	0.24
41	hsa-miR-5088-3p	1.97	0.70
42	hsa-miR-5089-5p	1.96	0.45
43	hsa-miR-924	1.95	0.38
44	hsa-miR-4747-3p	1.94	0.22
45	hsa-miR-6088	1.93	0.45
46	hsa-miR-152-3p	1.93	0.16
47	hsa-miR-200b-5p	1.93	0.35
48	hsa-miR-4791	1.92	0.25
49	hsa-miR-711	1.92	0.83
50	hsa-miR-4483	1.92	0.54
51	hsa-miR-1182	1.92	0.73
52	hsa-miR-4423-5p	1.92	0.81
53	hsa-miR-1275	1.92	0.41
54	hsa-let-7f-2-3p	1.89	0.52
55	hsa-miR-8082	1.88	0.30
56	hsa-miR-5089-3p	1.88	0.26
57	hsa-miR-1203	1.87	0.60
58	hsa-miR-6791-5p	1.87	0.78
59	hsa-miR-668-5p	1.86	0.70
60	hsa-miR-644a	1.85	0.38
61	hsa-miR-506-3p	1.85	0.23
62	hsa-miR-30e-3p	1.85	0.04
63	hsa-miR-382-5p	1.85	0.80
64	hsa-miR-3607-5p	1.84	0.43
65	hsa-miR-485-5p	1.84	0.34
66	hsa-miR-4475	1.84	0.32
67	hsa-miR-4731-5p	1.82	0.82
68	hsa-miR-3617-3p	1.82	0.47
69	hsa-miR-3920	1.82	0.20
70	hsa-miR-1238-5p	1.81	0.56
71	hsa-miR-656-5p	1.80	0.76
72	hsa-miR-548f-3p	1.77	0.30
73	hsa-miR-4485	1.77	0.30
74	hsa-miR-605-3p	1.77	0.17
75	hsa-miR-8078	1.76	0.29
76	hsa-miR-3195	1.76	0.38
77	hsa-miR-6806-5p	1.76	0.35

78	hsa-miR-4517	1.75	0.12
79	hsa-miR-4444	1.75	0.34
80	hsa-miR-3680-3p	1.75	0.40
81	hsa-miR-4677-5p	1.75	0.28
82	hsa-miR-4634	1.74	0.40
83	hsa-miR-19a-5p	1.74	0.22
84	hsa-miR-4256	1.74	0.13
85	hsa-miR-3943	1.74	0.53
86	hsa-miR-4701-5p	1.73	0.40
87	hsa-miR-4521	1.73	0.43
88	hsa-miR-4707-5p	1.73	0.41
89	hsa-miR-6759-5p	1.73	0.61
90	hsa-miR-5579-3p	1.72	0.30
91	hsa-miR-4670-5p	1.72	0.27
92	hsa-miR-5703	1.72	0.63
93	hsa-miR-1266-3p	1.72	0.23
94	hsa-miR-4515	1.72	0.26
95	hsa-miR-4717-3p	1.72	0.52
96	hsa-miR-6125	1.72	0.45
97	hsa-miR-6877-3p	1.72	0.40
98	hsa-miR-6133	1.71	0.46
99	hsa-miR-363-5p	1.71	0.27
100	hsa-miR-4488	1.71	0.14
101	hsa-miR-1261	1.70	0.10
102	hsa-miR-145-3p	1.70	0.20
103	hsa-miR-5195-3p	1.70	0.43
104	hsa-miR-4722-3p	1.70	0.46
105	hsa-miR-1181	1.70	0.57
106	hsa-miR-1237-5p	1.70	0.35
107	hsa-miR-3622b-3p	1.70	0.14
108	hsa-miR-6789-5p	1.70	0.28
109	hsa-let-7i-5p	1.70	0.35
110	hsa-miR-337-3p	1.69	0.37
111	hsa-miR-6780b-5p	1.69	0.34
112	hsa-miR-566	1.69	0.23
113	hsa-miR-499a-5p	1.68	0.28
114	hsa-miR-3940-5p	1.68	0.21
115	hsa-miR-3192-3p	1.68	0.61
116	hsa-miR-513c-3p	1.68	0.48
117	hsa-miR-4711-3p	1.68	0.14
118	hsa-miR-8069	1.68	0.48
119	hsa-miR-631	1.67	0.45
120	hsa-miR-3942-5p	1.67	0.31
121	hsa-miR-3150b-3p	1.67	0.17

122	hsa-miR-3928-5p	1.67	0.02
123	hsa-miR-6792-5p	1.66	0.34
124	hsa-miR-1263	1.66	0.19
125	hsa-miR-587	1.66	0.20
126	hsa-miR-1272	1.66	0.05
127	hsa-miR-6822-5p	1.66	0.57
128	hsa-miR-3960	1.66	0.43
129	hsa-miR-1250-5p	1.66	0.20
130	hsa-miR-8066	1.65	0.39
131	hsa-miR-298	1.65	0.20
132	hsa-miR-136-5p	1.65	0.32
133	hsa-miR-4535	1.65	0.34
134	hsa-miR-30b-3p	1.65	0.32
135	hsa-miR-8058	1.64	0.06
136	hsa-miR-3934-5p	1.64	0.39
137	hsa-miR-6722-3p	1.64	0.28
138	hsa-miR-6836-3p	1.64	0.11
139	hsa-miR-3652	1.63	0.40
140	hsa-miR-653-3p	1.63	0.29
141	hsa-miR-3682-3p	1.63	0.20
142	hsa-miR-5694	1.63	0.26
143	hsa-miR-3944-3p	1.63	0.17
144	hsa-miR-4999-5p	1.63	0.24
145	hsa-miR-431-3p	1.63	0.42
146	hsa-miR-6503-5p	1.63	0.52
147	hsa-miR-4745-3p	1.62	0.38
148	hsa-miR-4699-3p	1.62	0.24
149	hsa-miR-3662	1.62	0.05
150	hsa-miR-4652-5p	1.62	0.45
151	hsa-miR-26b-5p	1.62	0.32
152	hsa-miR-5001-5p	1.62	0.39
153	hsa-miR-6719-3p	1.62	0.23
154	hsa-miR-29b-2-5p	1.62	0.34
155	hsa-miR-4417	1.61	0.25
156	hsa-miR-5685	1.61	0.17
157	hsa-miR-521	1.61	0.50
158	hsa-miR-137	1.61	0.27
159	hsa-miR-1908-3p	1.61	0.36
160	hsa-miR-6863	1.61	0.23
161	hsa-miR-6827-5p	1.60	0.41
162	hsa-miR-3614-5p	1.60	0.16
163	hsa-miR-3182	1.60	0.10
164	hsa-miR-4729	1.60	0.39
165	hsa-miR-6726-3p	1.60	0.14

166	hsa-miR-508-5p	1.60	0.35
167	hsa-miR-4504	1.59	0.40
168	hsa-miR-4792	1.59	0.13
169	hsa-miR-3163	1.59	0.36
170	hsa-miR-4667-5p	1.59	0.34
171	hsa-miR-1184	1.59	0.52
172	hsa-miR-6823-5p	1.58	0.29
173	hsa-miR-197-5p	1.58	0.28
174	hsa-miR-6793-5p	1.58	0.18
175	hsa-miR-98-3p	1.58	0.10
176	hsa-miR-4747-5p	1.58	0.40
177	hsa-miR-567	1.58	0.14
178	hsa-miR-6089	1.57	0.07
179	hsa-miR-4778-5p	1.57	0.41
180	hsa-miR-499b-5p	1.57	0.47
181	hsa-miR-1256	1.57	0.14
182	hsa-miR-4711-5p	1.57	0.16
183	hsa-miR-6739-5p	1.57	0.47
184	hsa-miR-8072	1.57	0.13
185	hsa-miR-7704	1.56	0.26
186	hsa-miR-4497	1.56	0.16
187	hsa-miR-6761-5p	1.56	0.32
188	hsa-miR-4737	1.56	0.17
189	hsa-miR-2115-3p	1.55	0.12
190	hsa-miR-1910-3p	1.55	0.13
191	hsa-miR-4281	1.55	0.18
192	hsa-miR-601	1.55	0.40
193	hsa-miR-606	1.55	0.18
194	hsa-miR-3131	1.55	0.41
195	hsa-miR-4734	1.55	0.35
196	hsa-miR-4766-5p	1.55	0.11
197	hsa-miR-4420	1.55	0.27
198	hsa-miR-3196	1.55	0.26
199	hsa-miR-4718	1.55	0.24
200	hsa-miR-4524a-3p	1.55	0.37
201	hsa-miR-4767	1.55	0.33
202	hsa-miR-4650-3p	1.55	0.32
203	hsa-miR-4739	1.55	0.34
204	hsa-miR-4503	1.55	0.11
205	hsa-miR-6132	1.55	0.27
206	hsa-miR-6845-3p	1.54	0.35
207	hsa-miR-6079	1.54	0.06
208	hsa-miR-8073	1.54	0.21
209	hsa-miR-1289	1.54	0.28

210	hsa-miR-3137	1.54	0.09
211	hsa-miR-6816-3p	1.54	0.36
212	hsa-miR-203b-3p	1.54	0.22
213	hsa-miR-4292	1.54	0.43
214	hsa-miR-6729-5p	1.54	0.20
215	hsa-miR-6499-3p	1.54	0.10
216	hsa-miR-6869-3p	1.54	0.35
217	hsa-miR-5707	1.53	0.34
218	hsa-miR-7703	1.53	0.03
219	hsa-miR-541-5p	1.53	0.45
220	hsa-miR-6790-3p	1.53	0.06
221	hsa-miR-200c-3p	1.52	0.22
222	hsa-miR-410-5p	1.52	0.28
223	hsa-miR-7705	1.52	0.16
224	hsa-miR-5004-3p	1.52	0.29
225	hsa-miR-7974	1.52	0.17
226	hsa-miR-3651	1.52	0.30
227	hsa-miR-6788-5p	1.52	0.38
228	hsa-miR-6515-5p	1.52	0.34
229	hsa-miR-372-3p	1.52	0.18
230	hsa-miR-6876-3p	1.52	0.35
231	hsa-miR-1343-5p	1.52	0.36
232	hsa-miR-1231	1.52	0.22
233	hsa-miR-4524b-3p	1.52	0.49
234	hsa-miR-762	1.52	0.22
235	hsa-miR-3692-3p	1.52	0.15
236	hsa-miR-3923	1.52	0.14
237	hsa-miR-33b-3p	1.52	0.33
238	hsa-miR-3145-3p	1.51	0.35
239	hsa-miR-643	1.51	0.16
240	hsa-miR-3620-5p	1.51	0.33
241	hsa-miR-6878-5p	1.51	0.28
242	hsa-miR-559	1.51	0.22
243	hsa-miR-3613-5p	1.50	0.19
244	hsa-miR-4467	1.50	0.30
245	hsa-miR-7977	1.50	0.18
246	hsa-miR-7846-3p	1.50	0.13
247	hsa-miR-6501-3p	1.50	0.32
248	hsa-miR-4533	1.50	0.30
249	hsa-miR-624-5p	1.50	0.32

b. Downregulated miRNAs in *FTO* deficient cells.

	Feature	Mean	SD
1	hsa-miR-22-3p	0.28	0.02
2	hsa-miR-196a-5p	0.35	0.06
3	hsa-miR-7-5p	0.40	0.23
4	hsa-miR-769-5p	0.49	0.07
5	hsa-miR-92a-1-5p	0.52	0.17
6	hsa-miR-671-5p	0.55	0.15
7	hsa-miR-6769a-3p	0.56	0.28
8	hsa-miR-27b-3p	0.56	0.07
9	hsa-miR-215-5p	0.61	0.07
10	hsa-miR-1180-3p	0.63	0.07
11	hsa-miR-576-5p	0.63	0.02
12	hsa-miR-28-3p	0.65	0.03
13	hsa-miR-25-3p	0.66	0.04
14	hsa-miR-449c-5p	0.66	0.05
15	hsa-miR-641	0.67	0.03
16	hsa-miR-330-3p	0.67	0.06
17	hsa-miR-1286	0.68	0.07
18	hsa-miR-561-5p	0.69	0.11
19	hsa-miR-9-5p	0.69	0.11
20	hsa-miR-218-5p	0.69	0.12
21	hsa-miR-195-5p	0.70	0.11
22	hsa-miR-148a-5p	0.71	0.10
23	hsa-miR-16-5p	0.71	0.04
24	hsa-miR-31-5p	0.71	0.08
25	hsa-miR-1910-5p	0.72	0.17
26	hsa-miR-3176	0.72	0.12
27	hsa-miR-4661-3p	0.73	0.19
28	hsa-miR-877-5p	0.73	0.01
29	hsa-miR-148b-5p	0.73	0.10
30	hsa-miR-423-5p	0.74	0.04
31	hsa-miR-941	0.74	0.03
32	hsa-miR-181b-5p	0.74	0.11
33	hsa-miR-548b-5p	0.75	0.08
34	hsa-miR-30e-5p	0.75	0.19
35	hsa-miR-21-5p	0.76	0.18