Library Number	RMK014
Library Name	Oxidative Phosphorlyation Library
Old Document Name	190628_Oxphos Library
Library Purpose	CRISPR/Cas9 Knockout of genes from oxidative phosphorylation genes in mouse T cells
Location	targeted metabolic pathway libraries box, -20 freezer in B3301
Designer Name	Ayaka Sugiura/Kate Beier
Designing Date	2019-06-28
Design Reference	Mouse CRISPR Knockout Pooled Library (Brie)
	(Addgene#73632) (Doench et al., 2016)
Usage Reference	Ayaka Sugiura

Species	Mouse (Mus musculus)
Total Gene #	112
Total Target #	458
Gene Group	
1. Negative Controls	10 Nontargeting controls (NTC)
2. Positive Controls	Tsc2
3. Oxphos genes	112
Target Number	
1. Negative Controls	10*1=10
2. Positive Controls	Tsc2
3. Oxphos genes	112*4=448

Note: Target selected from KEGG pathways

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
1	Atp5a1	TGGTCAGAAGCGGTCCACTG
2	Atp5a1	GCTCCCGCACAGAGATTCGG
3	Atp5a1	ACTGGGCGTGTGTTAAGCAT
4	Atp5a1	CCAACAGCTCCTCGCCAACG
5	Atp5b	CTGCTGGCCCCATACGCCAA
6	Atp5b	GCGCTTACCAGGATGAACCC
7	Atp5b	AAATACAGAGTAACCACCAT
8	Atp5b	CCCACCCTAGCCACCGACAT
9	Atp5c1	CCGATGTGGTCCTACCATTG
10	Atp5c1	TGTCATTCAAAGATGTGGGA
11	Atp5c1	AGAACCTGTCCCATACACTC
12	Atp5c1	GGCTGATATTAAGGCACCTG
13	Atp5d	TCAGGCGCGTACATACGCCG
14	Atp5d	GTGAGTTCGTACCTGCGTCG
15	Atp5d	CCAAAGGCTCCAGTCAGCGT
16	Atp5d	CTCACCAAAGTACTTAGTCG
17	Atp5e	GAGACACCATGGTGGCGTAC
18	Atp5e	GTGGCGTACTGGCGACAGGC
19	Atp5e	AGATCTGTGCAAAAGCAGTG
20	Atp5e	CTGGGAAAACCGGATGTAGC
21	Atp5g1	CTTCCTTACCTGCTTAGATG
22	Atp5g1	GATGTCCCGGGAAATGACAC
23	Atp5g1	CACAGGCCTGATTAGACCCC
24	Atp5g1	TGGGGCCGCCACAGTTGGTG
25	Atp5g2	CAGATGCCAACAGATGAGGT
26	Atp5g2	AAAATGTACTCACCAGGGAG
27	Atp5g2	TGGCGCTGGTTTGGAAACTG
28	Atp5g2	TTCAACTCCACTGCAGACAG
29	Atp5g3	GCCCGGGTTACGCACCAGAG
30	Atp5g3	AATGTCTCTGCTGATTACAC
31	Atp5g3	TCTCGGCCAGAGACTAGGAC
32	Atp5g3	GTGTGTGTCAGCTGATCCGA
33	Atp5h	TACAGCATACTGACCTGGCG
34	Atp5h	CCTGAAGATTCCTGTGCCTG
35	Atp5h	CACAGCCCTGGTGGACCAGG
36	Atp5h	GGCTTACTACAGGGCCAATG
37	Atp5j	TTATACACCAGGGCATCTGG
38	Atp5j	TCCACGAAGAGTTTCTGTAC
39	Atp5j	GAACATTGGTGTTACAGCTG
40	Atp5j	GACTGCTGACCGAAGGACAG
41	Atp5j2	ATTGCCGGAGCCTTTCGGAG
42	Atp5j2	AAGTACATCAACGTTCGGAA
43	Atp5j2	AGGCTCCGGCAATGCCACTG
44	Atp5j2	TGCCGAGCTGGATAATGATG
45	Atp5k	TGCCATGCCGATGATCAGAG
46	Atp5k	CCCAGGTTACCTAAAACCCC

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
47	Atp5k	GAGTGGAGAGACCTGAACCG
48	Atp5k	TGAGGATTCACCTTGATGAG
49	Atp5l	AAGGCACCGTCGATGGTAGC
50	Atp5l	CAAGTTCATCCGTAACTTCG
51	Atp5l	AGCTGTAGGGATTTCAGCAG
52	Atp5l	CTTGGCGTAGTGCCAAAATG
53	Atp5o	ATGCCGTAGACCTGAACAGG
54	Atp5o	TGCATGGCACTTCTCCGCGG
55	Atp5o	AAAAGGCAGAGATGATACCC
56	Atp5o	GAACAGCCAGAGACACTTTG
57	Atp6ap1	GAGGATTTCACAGCATACGG
58	Atp6ap1	GATATGACCCTCATGTGTGT
59	Atp6ap1	TAGCTAGATCCACATGCAAG
60	Atp6ap1	GTGTCATTGTAACTCACAGG
61	Atp6v0a1	GCACCTTGATGAACCAGACG
62	Atp6v0a1	TGAAATCGAAAACCCGCTGG
63	Atp6v0a1	ACTTACCGAGAGATTAACCC
64	Atp6v0a1	GTTTGCACTACGAAGAGGCA
65	Atp6v0a4	TGCTGACCAGTGTCAACGTG
66	Atp6v0a4	TGTGGATGGTCCTAAATGAG
67	Atp6v0a4	CCAGGGTGATCATTTCCCGA
68	Atp6v0a4	CACGGCTGGTGTGATAAACA
69	Atp6v0b	GCCGGTTATATAGATTCCCC
70	Atp6v0b	CAGATTCGACCACATGAAGG
71	Atp6v0b	TATTATCTTCTGTGAAGCGG
72	Atp6v0b	CCACATCAAAGCGAAAGCCC
73	Atp6v0c	CTCACCGCTGAAGACCATGG
74	Atp6v0c	CGAAAAACGAAGAATATTCG
75	Atp6v0c	GCCCAGCACTCACCTGTAGA
76	Atp6v0c	TCGCAGCCATGTCAGTCATG
77	Atp6v0d1	TGGTGATGATGAAAGCGCGG
78	Atp6v0d1	CAAGTTCAGCTATTGAACGC
79	Atp6v0d1	TCGATGACTGACACCGTCAG
80	Atp6v0d1	TACTTGGAGGGATTAGTGCG
81	Atp6v0d2	ACTGCGCAATAAACTATACA
82	Atp6v0d2	GATGATTAAAGCGCGTCTGT
83	Atp6v0d2	GAGCTCCACTTACGTCATGT
84	Atp6v0d2	CTAGCCAAGTGTCACCCACT
85	Atp6v0e	ACCCCCGGTTAGGACCCTTG
86	Atp6v0e	ATCGTGATGAGCGTGTTCTG
87	Atp6v0e	GGATAAACCAGGGCACGAGG
88	Atp6v0e	AACTGAACAAGTCACCAACA
89	Atp6v1a	TGACTGCTGATATCCGACAG
90	Atp6v1a	AGTCGGCCATCATACTGACG
91	Atp6v1a	ATGTTGCCCCCACGTAACAG
92	Atp6v1a	CTTACGGGAAAAGGGCATCG

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
93	Atp6v1b1	CCATGACCGAATCTACCCCG
94	Atp6v1b1	ATGAATACTCACTGACTCGG
95	Atp6v1b1	CACTCCTCTGAGTACCATCA
96	Atp6v1b1	GGCTGGGCTCCCCCACAATG
97	Atp6v1b2	TCTGGATAGATCCGACACTG
98	Atp6v1b2	GTCCACTTGACATTACCAGA
99	Atp6v1b2	TGCTGGATTACCACACAACG
100	Atp6v1b2	AGCCTACAAGACTGTCTCTG
101	Atp6v1c1	TTTGCTAACGCGAAGCCTGG
102	Atp6v1c1	GATATTTAGCCATATCCCAC
103	Atp6v1c1	TCGATAATGACCTAAAGTCT
104	Atp6v1c1	TCCCTTGTAGGTTGGCACGT
105	Atp6v1c2	GAGACCCTCCTGGCTAACGG
106	Atp6v1c2	TCTCCCTAGATTGATCGCCG
107	Atp6v1c2	ACTGAGCGATATTGTCAGCA
108	Atp6v1c2	TTTCTTATCAGACAGCAACC
109	Atp6v1d	GAACTGACCGGTTTAGCCAG
110	Atp6v1d	TAGGGCACAGACCATCATGA
111	Atp6v1d	CTGAGGCCAAATTCACAGCA
112	Atp6v1d	GCGGAATTATGCCAAAGCAG
113	Atp6v1e1	CCAACTTGATGAATCAAGCA
114	Atp6v1e1	TTTGTAGGATCTGCTAAATG
115	Atp6v1e1	TCAGTCTTTGCGTTTGCACA
116	Atp6v1e1	AGGCATCCAAGCATACCTGA
117	Atp6v1e2	TCTCATCTTAGAATTGCTCA
118	Atp6v1e2	GAGAAACCAGGCTCGCATCA
119	Atp6v1e2	CGGCAGCGGACAATCATCAC
120	Atp6v1e2	GCACCGCAGACTCCACCAGG
121	Atp6v1f	GGGCAGAGGTAAGCTAATCG
122	Atp6v1f	CTACCAGGAAATTAGGGTGG
123	Atp6v1f	TTTCTAAACAGGGATGACAT
124	Atp6v1f	CAACCAGTACATCGCAGAGA
125	Atp6v1g1	TTGAAACAGGAAAGAACCGG
126	Atp6v1g1	GGCCGCCGAGAAGGTGTCCG
127	Atp6v1g1	ACTCCTTCTCCCTCTGCAGG
128	Atp6v1g1	GTTCAAGGCCAAGGAAGCTG
129	Atp6v1g2	GGAGGTGGAGCAATACCGCA
130	Atp6v1g2	GAGGAGCTGCTGGATACCCT
131	Atp6v1g2	CCCAGGCCATGGGCTCTCAG
132	Atp6v1g2	CCGGCGACTGAAGCAGGCGA
133	Atp6v1g3	GCTCTTCTATTTCATCCGAG
134	Atp6v1g3	GGCCAAGGACAAGCTAGATG
135	Atp6v1g3	CAGGAAAAGGAAAGCGACTG
136	Atp6v1g3	GGACCAGTACAGAATGCAGA
137	Atp6v1h	GAATGATATTATAGCGACGA
138	Atp6v1h	CTGCAGCATATCGTCAACCA

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
139	Atp6v1h	GGATCCTGGCGATTCAACAT
140	Atp6v1h	TCATAGCCAGAGCATACTCT
141	Cox10	TCTGTCCCGGAAGCCAAATG
142	Cox10	GGGAGTGAATCCACTCACAG
143	Cox10	TATACAGGGATTGCCACACA
144	Cox10	AGTTGGCAGCACAGGATGCG
145	Cox11	GAGCCGATAGAGGGGCACCG
146	Cox11	GGGACATGGAAGCGCCCGTG
147	Cox11	ACGTTCATGCCAGTCTCCAG
148	Cox11	CTCAGACCAGATCGAGAACA
149	Cox15	AGAAAGGGTTGGCTCAACCG
150	Cox15	AGGCGGTACTGACTGACCCG
151	Cox15	GGTACATGGAATACTCACAC
152	Cox15	TAGGGTGGCGTCCAGAACAC
153	Cox17	CCAAGAAGGCGCGTGATGCG
154	Cox17	TGGAAAGATGCCGGGACTGG
155	Cox17	CGCTAGCCCTGCCCCGCCCG
156	Cox17	TGCCTGCCCGGAAACCAAGA
157	Cox4i1	TGCTCGCGACCGGAAGAACG
158	Cox4i1	CACGCCGATCAGCGTAAGTG
159	Cox4i1	AGCTTCGCCGAGATGAACAG
160	Cox4i1	GGCAGACAGCATCGTGACAT
161	Cox4i2	GGGCGTAGCAGTCAACGTAG
162	Cox4i2	CCAGCGCTCCTATCCCATGC
163	Cox4i2	GGACAGGACTCAGAACTAGA
164	Cox4i2	CTTCTGCACAGAGCTCAGCG
165	Cox5a	CCGTCGCTGTACCGCAGCCG
166	Cox5a	CCCATGAGAATAGCAGCGAA
167	Cox5a	TGAGGAGTTTGATGCTCGCT
168	Cox5a	CTGCATTGCGAGCATGTAGA
169	Cox5b	TAGCCTGCTCCTCATCAGTG
170	Cox5b	AAAGGCAGCTTCAGGCACCA
171	Cox5b	TCACGTACCTCCAGAAGCCA
172	Cox5b	ATCATGATAGCAGCACAGAA
173	Cox6a1	TGAGGGTAGGCAACGAACGG
174	Cox6a1	CCGTGGGCGCCACTCGACAT
175	Cox6a1	CGCCGCAGCTCGGATGTGGA
176	Cox6a1	TCAACGTGTTCCTCAAGTCG
177	Cox6a2	CTTAACTGCTGGATGCACGC
178	Cox6a2	GCCGGGAAGAGCCAGCACAA
179	Cox6a2	GGTGATACGGGATGAACTCT
180	Cox6a2	AGGGAGCAGAGGGCTACGCC
181	Cox6b1	AAGGCAATGACGGCCAAGGG
182	Cox6b1	AACTGTTGGCAGAACTACCT
183	Cox6b1	AGAACCAGACTAAGAACTGT
184	Cox6b1	ACGCCGGTACCACTCACACA

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
185	Cox6b2	GTGAAGACCATGAATCGCCG
186	Cox6b2	ACACGGAAATAGTACTCGCA
187	Cox6b2	GGGAAGCGCGGATCAAAGGG
188	Cox6b2	CGTTGTCCATTGGCCCGGAG
189	Cox6c	TATTGCTGGCGCATTCATTG
190	Cox6c	AATATGAACCCGCAGACGCT
191	Cox6c	AGCACATACCTTATAGGCAG
192	Cox6c	TGGTTTGGGCAACAGCGCAC
193	Cox7a2	GGGATGCCAGTTCATCTGAA
194	Cox7a2	GAGCCATTGTGGCTCTGTAG
195	Cox7a2	ATGTTGCGGAATCTGCTGGT
196	Cox7a2	CTGGCATCCCATTATCCTCC
197	Cox7a2l	GCGGCAAAAGTGTACCTGCG
198	Cox7a2l	GGTGTGGCAAATATGATAGG
199	Cox7a2l	TGACAGCATATGATTATTCT
200	Cox7a2l	ATCATATGCTGTCACACTGG
201	Cox7b	TTATCTGCTCACCTTGGAGA
202	Cox7b	GGGAATGCTATATTAGCAGG
203	Cox7b	AACTAGGTGCCCTCTTCTGG
204	Cox7b	TAGCATTCCCATATTTGTCA
205	Cox7b2	GCAATATGATGCTAATTAGT
206	Cox7b2	GTTTAGTGCATATCTGGCCA
207	Cox7b2	CCAAGCATTCTGAAAATTGT
208	Cox7b2	GAAGAAACTCATGACAAATA
209	Cox7c	CCGGAGGTTCACGACCTCCG
210	Cox7c	GCCACTATGAGGAGGGTCCG
211	Cox7c	TTTCAGTGGAAAACAAGTGG
212	Cox7c	TCCCCGGACCCTCCTCATAG
213	Cox8a	GCCTGACCGGCTCGGCCCGG
214	Cox8a	TTCGAGTGGACCTGAGCCCG
215	Cox8a	TCTGTGTAGGATATCACCAT
216	Cox8a	GCTCCCGCGCCGGCTTCGAG
217	Cox8b	CAAAACTCCCACTTCCGCCG
218	Cox8b	AGCGCCTGCGAAGTTCACAG
219	Cox8b	TGGAGCAGCCGCAGGATAGG
220	Cox8b	CTGTGAACTTCGCAGGCGCT
221	Cox8c	GCTTCGAGAACAGGACTGCA
222	Cox8c	AAAAAAAATCCTGTCGCCCA
223	Cox8c	TTCTCGAAGCCTGGCCACCC
224	Cox8c	GGCTTTCTGAGTGGCTGAGG
225	Cyc1	TAGCTCGAACGATGTAGCTG
226	Cyc1	GGTGGGAGTGTGCTACACGG
227	Cyc1	AGCTACCCATGGTCTCATCG
228	Cyc1	GGTCCCGGCAGCTTCCATTG
229	Ndufa1	CATCCACAAATTCACCAACG
230	Ndufa1	TGTACGCAGTGGACACCCCG

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
231	Ndufa1	GAATTTGTGGATGTACGCAG
232	Ndufa1	CGCGTTCCATCAGATACCAC
233	Ndufa10	TCGATATAGATGACTGCGTG
234	Ndufa10	CCACTAAACTCTATGTCGAG
235	Ndufa10	TGGGAAAAACAAGCTCGCAA
236	Ndufa10	CTGGAGGCAATGTACAACCA
237	Ndufa11	CAACCCCGCAGATTCCACCC
238	Ndufa11	TCTTACCATGAGGTCCCCGA
239	Ndufa11	GGCCGGTACACATTCACTGC
240	Ndufa11	AGCGGAGCCGATTATGCCTG
241	Ndufa13	GGTTCCGCTTGTAGTCGATG
242	Ndufa13	ACTGACCCGACAGTCCCCGG
243	Ndufa13	GATTCTCCGGGAAAACCTGG
244	Ndufa13	GTGGAACCAGGAGCGCAGGT
245	Ndufa2	GCAGGGATTTCATCGTGCAA
246	Ndufa2	TCTGATCCGCGAATGCTCGG
247	Ndufa2	ATTCGCGGATCAGAATGGGC
248	Ndufa2	GGCTGCCGCTGCTAGCCGAG
249	Ndufa3	GCCACACCCTACAACTACCC
250	Ndufa3	TGCTAGCATACTTGGTGTAG
251	Ndufa3	CATGGGCATAATTATAGCTG
252	Ndufa3	GTATGCTAGCATGATCAACA
253	Ndufa4	AAAGACCGTGAACTTACGCT
254	Ndufa4	AGCACTGTATGTGATGCGCT
255	Ndufa4	CACTGTTTAATCCAGATGTC
256	Ndufa4	TCTTCGTATTTATTGGAGCA
257	Ndufa5	GGTGTGCGACACTCCACACG
258	Ndufa5	TTAGAAGCCTTGCTTCAGGG
259	Ndufa5	CGCACACCGCCAACCCCACC
260	Ndufa5	GAAGCTGGATATGGTCAAGG
261	Ndufa6	GCACCTCCCGATACCAAGCG
262	Ndufa6	ATATCACGGTGAAACAAGGA
263	Ndufa6	ACTGAAAATGGGCTTCACCG
264	Ndufa6	ACCTGAACGAGGCCAAGCGG
265	Ndufa7	AGGGAGGCACAACTTCCCGG
266	Ndufa7	CTCGCGTTATCCAAAAGCTG
267	Ndufa7	CCACCTCCGAAACTCCCCGT
268	Ndufa7	GCTACCAGGAGATCGCCAAG
269	Ndufa8	AGCTGCCGCCCATCACTATG
270	Ndufa8	GCAGATAAAGAGTCACTGTG
271	Ndufa8	GGAGTTTATGCTGTGCCGCT
272	Ndufa8	AAAGTTTGACCAGTGTGTGC
273	Ndufa9	GGTTAACAACGTATCGACCC
274	Ndufa9	CCAGGTCACCCATCAGACGA
275	Ndufa9	GATGCCTGAGCTATTGCTCG
276	Ndufa9	GTCATACCTCACGGGAAAGG

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
277	Ndufab1	GGCCGCGCCAAGGCCAACGT
278	Ndufab1	CACCTGCGCGAGCGCCAAGG
279	Ndufab1	GATTCCGTCTAACGTCAGTG
280	Ndufab1	TGATAAGATTGATCCAGAAA
281	Ndufb10	GAAGGCCTACGACCTCGTCG
282	Ndufb10	GCACTCGACGGTACTGTCGG
283	Ndufb10	GCGGCGAGGGAGCAGGCGTG
284	Ndufb10	GAAGGCTTGTCAGCAGAGGG
285	Ndufb11	TGTAATCGCCCCATCCGGTG
286	Ndufb11	GGACGAAAACGTCTACGCGA
287	Ndufb11	TATTCCAGACGTCCACCACA
288	Ndufb11	GTCGCTGCCTGTCAGCAGCG
289	Ndufb2	ACATATTCAGCCCCGGTACA
290	Ndufb2	GCGGCCGAAAGGTACCAGAC
291	Ndufb2	GTACCTTTCGGCCGCGTCGG
292	Ndufb2	GAACTCACCCTGGATCACCT
293	Ndufb3	GCTGGACATGGACATGAACA
294	Ndufb3	AACTTCCAGATTACAGACAG
295	Ndufb3	GACTCATCTTACCGAGCCCA
296	Ndufb3	CATGGACATGAACATGGACA
297	Ndufb4	CGATGTGCGACACGCGTTTG
298	Ndufb4	GAGACACGTCATACTCGGCA
299	Ndufb4	GGTCGAGCGCTTGAGCATAA
300	Ndufb4	TAGGTCCAGCGAATCAAGGC
301	Ndufb5	CTCCGAGTCTAGGACCAGCG
302	Ndufb5	AGTTATAATTGGCATAACAC
303	Ndufb5	ACTATGACGCTCGCTTCTTG
304	Ndufb5	CGGGCGATCCATCTTGATAT
305	Ndufb6	TAATAGTGAACAAACCACAT
306	Ndufb6	GTTATCCCAGAATCGCTCCA
307	Ndufb6	CGGGGCCGTGTGGAAGAACA
308	Ndufb6	ACACGCCGGATGAGAAGCTG
309	Ndufb7	GGAAGCTGGGTATCTTCTCG
310	Ndufb7	CTCACCACTCCCCACAGTGA
311	Ndufb7	CCTTGCGCTCCGGAAAGCCG
312	Ndufb7	AGGCATCCCACAGATAGCGC
313	Ndufb8	GGGGTCCTAGGATATGACCC
314	Ndufb8	CAAGAAGTATAACATGCGAG
315	Ndufb8	CATGTACATCAGGAATCGTG
316	Ndufb8	CAACCGATCACAGCATGAGA
317	Ndufb9	TGTGGATACACCATGACTCG
318	Ndufb9	GTAGCACTCATATCTCTCGA
319	Ndufb9	AGAATGAGAAGGATATGATG
320	Ndufb9	AGGATACATTGCTTTCTCAG
321	Ndufc1	TTGGCAGTTGGACTGTCCGT
322	Ndufc1	CGAAAACGAGCGCAGCACTA

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
323	Ndufc1	CACGGTCGAAGTTCTATGTC
324	Ndufc1	CAATGCCAAACCTAACTGGT
325	Ndufc2	AGCCCATGTAGACAAGCCGC
326	Ndufc2	CAACATGCTGCGGATGCGAC
327	Ndufc2	AAAGTATCCAGCAAAGACAA
328	Ndufc2	AGGACGTAACGAACAGAAGC
329	Ndufs1	AATGGATCTCTGATAAAACC
330	Ndufs1	TGTCCTATTTGTGACCAGGG
331	Ndufs1	TAGAGGTTAGGGCCCCTACA
332	Ndufs1	TGATGGTCAGTCTGTCATGG
333	Ndufs2	GCGGCGTATATCCGACCTGG
334	Ndufs2	TAGCACTCACCATTCCAAGG
335	Ndufs2	CCTCGGGCACAGTGGATCCG
336	Ndufs2	CACATCGGGCTCCTGCACCG
337	Ndufs3	TTGTGGGTCACATCACTCCG
338	Ndufs3	TACGTGCTGCCACAGCACGG
339	Ndufs3	CAGCGTTGGGATGACTCCAT
340	Ndufs3	GGGTGTCAGCTCATCTGCAT
341	Ndufs4	CCTGGATGGAACTCTACAGA
342	Ndufs4	AGAGCACATCAAAACCAGAA
343	Ndufs4	GTTGATGCCCAACCCATCAA
344	Ndufs4	GTTGTCTGCCAGCTTCCAAG
345	Ndufs5	TTCAAATGCGTGGCACCGAG
346	Ndufs5	GCCACGCATTTGAAAAAGAG
347	Ndufs5	AGTGGATAGAGTGTGCACAC
348	Ndufs5	CTTGACATACAGAAAAAGCT
349	Ndufs6	GGGGTTCAAGTGTCGCCGAG
350	Ndufs6	CGAAACCCCGTGCAGCCCTG
351	Ndufs6	TGGGGAGAGTCAACAGCCGG
352	Ndufs6	TGATGAAAAAGACTACAGGA
353	Ndufs7	AAGCGGTCCATGTCATAGCG
354	Ndufs7	CATCAGAGTGTAGCCACTGA
355	Ndufs7	TGGCACGCTTACCAACAAGA
356	Ndufs7	CCCGGCGTGCCCAGTTGATG
357	Ndufs8	ATGTGGACAGAACTCATCCG
358	Ndufs8	TCAGTGGGCCCTTCTCAAAG
359	Ndufs8	AAGCCTTCATAGCAGCGCAG
360	Ndufs8	CCGAGCTGCATTGTCAGTTG
361	Ndufv2	ATTCAATACCTTGTTCATAG
362	Ndufv2	AAGGTGTAGTAGTGCAGACC
363	Ndufv2	TAGTAAAAAACTACCCAGAA
364	Ndufv2	CTCTTACCCACTGAGCAGCG
365	Ndufv3	AAGACACAAAGTGTGCTCAA
366	Ndufv3	GAGAACTGGTTTCTGTAGTG
367	Ndufv3	AGAGTCAGAGAAGAGTGCAA
368	Ndufv3	AGGACGGATCCGGGCGCTGA

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
369	Sdha	GTCAGTTACCTCAACCACAG
370	Sdha	TTCTACTCAATACCCAGTGG
371	Sdha	TGCACAGTGCAATGACACCA
372	Sdha	ACTGTGCATTACAACATGGG
373	Sdhb	TGCGCCATGAACATCAACGG
374	Sdhb	ACAGTATCTGCAGTCCATCG
375	Sdhb	ACCTCGAATGCAGACGTACG
376	Sdhb	TAGAAGTTACTCAAATCCTG
377	Sdhc	TACTTGTAGATAGTCAAATG
378	Sdhc	TCTGGAATAGCCTTGAGTGG
379	Sdhc	TTTGGGAACCACAGCTAAGG
380	Sdhc	CAGGAAGCAGCAGTGCCGAC
381	Sdhd	GCAGAGAGGACATACAGTGG
382	Sdhd	AGGACCAGCCTACCCAAGGA
383	Sdhd	TGCAGTGGCCAAGGAGCTCG
384	Sdhd	AGGGATTCAAGTACCCAGCA
385	Tcirg1	ACACAAGTGCCTCATCGCGG
386	Tcirg1	TCTCCCGAAAGCTGGCAATG
387	Tcirg1	CAGCCACACTCCAACCTGAG
388	Tcirg1	CGCTACAGGGAAGTTAACCC
389	Uqcr10	GAAGGCTCGCTCGAAGAACA
390	Uqcr10	GGGCAAAGGTGGAAGTTCTG
391	Uqcr10	AGCAAGGAGTACAGGCGCGA
392	Uqcr10	TTCGAGCGAGCCTTCGATCA
393	Uqcr11	GAACTGGCCAGAAACTGGTG
394	Uqcr11	CCTACCAGGATTCCCACAGC
395	Uqcr11	CAGGATCAGCCGCCAGTCCG
396	Uqcr11	CTGGCCAGTTCCCGGTAGCG
397	Uqcrb	ATGCCTCATAGTCAGGTCCA
398	Uqcrb	GCTGCAGGATTCAATAAACT
399	Uqcrb	TAGTTTCAGCATCAAGCAAG
400	Uqcrb	AGCCATAAGAAGGCTTCCTG
401	Uqcrc1	AGCATGCGAGGACTGCTCCG
402	Uqcrc1	AGACAACGTGACCCTCCAAG
403	Uqcrc1	TCACTGCCAGTGAAGCGACA
404	Uqcrc1	ACAGACATTACAAAGCCCCC
405	Uqcrc2	AACAAGCCGATTCTTGACAG
406	Uqcrc2	ACAGTACAAAGGATTAGCCA
407	Uqcrc2	CATCTTTCAAGATAACCCGT
408	Uqcrc2	GCAAAAGCCAAATACCGTGG
409	Uqcrfs1	CTTGATCTCGATCTTCGACA
410	Uqcrfs1	TGCTTATGCGGCCAAAAATG
411	Uqcrfs1	CTCACCGTTCAGGCCCACCG
412	Uqcrfs1	CGCTTCACATCCAGAACAGG
413	Uqcrh	TGGATCTGGAGACCCCAAAG
414	Uqcrh	GACGAACGAAAGATGCTCAC

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
415	Uqcrh	AATCCTCTTCTGTCTGTGAC
416	Uqcrh	GCTCTCTCACTGTTGTTAGG
417	Uqcrq	GATCCCTACAGCGTTTGTAG
418	Uqcrq	CTCAAAGGGCGACAAGCTGT
419	Uqcrq	GCAGGATGCGCTCGCGAGTG
420	Uqcrq	TTTGCTGAAATAGCTTGGGA
421	Cox7a1	GACCTCCCAGTACACTTGAA
422	Cox7a1	AAGCCACTTAGAAAACCGTG
423	Cox7a1	TGGTAGATGAGCTAAAAGAC
424	Cox7a1	AAAAGACCGGACCAGAGCCT
425	Ndufv1	CCCACAGGTAGCTATCCGAG
426	Ndufv1	CGGATCTTTACCAACCTGTA
427	Ndufv1	CCTCGTTGTAGAATTCCCCT
428	Ndufv1	GCCGCCTATATCTACATCCG
429	Ndufa12	CCTACCTGAAGAAAACCCGT
430	Ndufa12	CCCACTCAGGCCGCCACCGA
431	Ndufa12	CCTGCTGCACGCCGCGCTTC
432	Ndufa12	CTTAAAGGGCAAATGATATA
433	Atp5f1	GCGGCCGCGTTCTTCAGACA
434	Atp5f1	CTACCCTCTGCACATCGAAG
435	Atp5f1	CAGTTCCTTTACCCTAAGAC
436	Atp5f1	AGCCCCGTGTCTGAAGAACG
437	Atp6v0a2	TGAAGAGCTCGAACGAATAC
438	Atp6v0a2	CAACAGAGAGTCGTTCTCTA
439	Atp6v0a2	CTACAGCTGCATGCAGCGGC
440	Atp6v0a2	TCTTCGTGACCCTCAGCATG
441	BRDN0000737434	AAACTCCCGTGTCAACCGAT
442	BRDN0000737467	AAACCTAGCGTAGATTCGGC
443	BRDN0000737505	AAAAAGTCCGCGATTACGTC
444	BRDN0000737609	AAACTCATACGTAGCGAATC
445	BRDN0000737637	AAAACGTAATTATACCGAGC
446	BRDN0000737693	AAAACGGCTCGATCGGTGAT
447	BRDN0000737801	AAACCCCCGCGCGGAGCGTC
448	BRDN0000737848	AAACGAGGCTGTTCGTACAC
449	BRDN0000738185	AAAATTGCACCTTCCCGGCC
450	BRDN0000738254	AAAGACGTGCATTCAGCGAG
451	Tsc2	TGAACCACATGGCTATGACG
452	Tsc2	CACAGGGTGATAATGAACAG
453	Tsc2	CAGCTCCAAAGACCCTTGAG
454	Tsc2	CTGATCCTAGCACACATGTG
455	Rheb	AACAAACTGAATTGTCAATG
456	Rheb	CCATATCCAACAACTTGCCA
457	Rheb	TTCAGCTTGTAGACACAGCG
458	Rheb	TCATAGGATACCTATTATGT

Original Doc Name: 190628_Oxphos Library

Target.Gene.Symbol	sgRNA.Target.Sequence
Atp5a1	TGGTCAGAAGCGGTCCACTG
Atp5a1	GCTCCCGCACAGAGATTCGG
Atp5a1	ACTGGGCGTGTGTTAAGCAT
Atp5a1	CCAACAGCTCCTCGCCAACG
Atp5b	CTGCTGGCCCCATACGCCAA
Atp5b	GCGCTTACCAGGATGAACCC
Atp5b	AAATACAGAGTAACCACCAT
Atp5b	CCCACCCTAGCCACCGACAT
Atp5c1	CCGATGTGGTCCTACCATTG
Atp5c1	TGTCATTCAAAGATGTGGGA
Atp5c1	AGAACCTGTCCCATACACTC
Atp5c1	GGCTGATATTAAGGCACCTG
Atp5d	TCAGGCGCGTACATACGCCG
Atp5d	GTGAGTTCGTACCTGCGTCG
Atp5d	CCAAAGGCTCCAGTCAGCGT
Atp5d	CTCACCAAAGTACTTAGTCG
Atp5e	GAGACACCATGGTGGCGTAC
Atp5e	GTGGCGTACTGGCGACAGGC
Atp5e	AGATCTGTGCAAAAGCAGTG
Atp5e	CTGGGAAAACCGGATGTAGC
Atp5g1	CTTCCTTACCTGCTTAGATG
Atp5g1	GATGTCCCGGGAAATGACAC

Target.Gene.Symbol	sgRNA.Target.Sequence
Atp5g1	CACAGGCCTGATTAGACCCC
Atp5g1	TGGGGCCGCCACAGTTGGTG
Atp5g2	CAGATGCCAACAGATGAGGT
Atp5g2	AAAATGTACTCACCAGGGAG
Atp5g2	TGGCGCTGGTTTGGAAACTG
Atp5g2	TTCAACTCCACTGCAGACAG
Atp5g3	GCCCGGGTTACGCACCAGAG
Atp5g3	AATGTCTCTGCTGATTACAC
Atp5g3	TCTCGGCCAGAGACTAGGAC
Atp5g3	GTGTGTGTCAGCTGATCCGA
Atp5h	TACAGCATACTGACCTGGCG
Atp5h	CCTGAAGATTCCTGTGCCTG
Atp5h	CACAGCCCTGGTGGACCAGG
Atp5h	GGCTTACTACAGGGCCAATG
Atp5j	TTATACACCAGGGCATCTGG
Atp5j	TCCACGAAGAGTTTCTGTAC
Atp5j	GAACATTGGTGTTACAGCTG
Atp5j	GACTGCTGACCGAAGGACAG
Atp5j2	ATTGCCGGAGCCTTTCGGAG
Atp5j2	AAGTACATCAACGTTCGGAA
Atp5j2	AGGCTCCGGCAATGCCACTG
Atp5j2	TGCCGAGCTGGATAATGATG
Atp5k	TGCCATGCCGATGATCAGAG

Target.Gene.Symbol	sgRNA.Target.Sequence
Atp5k	CCCAGGTTACCTAAAACCCC
Atp5k	GAGTGGAGAGACCTGAACCG
Atp5k	TGAGGATTCACCTTGATGAG
Atp5l	AAGGCACCGTCGATGGTAGC
Atp5l	CAAGTTCATCCGTAACTTCG
Atp5l	AGCTGTAGGGATTTCAGCAG
Atp5l	CTTGGCGTAGTGCCAAAATG
Atp5o	ATGCCGTAGACCTGAACAGG
Atp5o	TGCATGGCACTTCTCCGCGG
Atp5o	AAAAGGCAGAGATGATACCC
Atp5o	GAACAGCCAGAGACACTTTG
Atp6ap1	GAGGATTTCACAGCATACGG
Atp6ap1	GATATGACCCTCATGTGTGT
Atp6ap1	TAGCTAGATCCACATGCAAG
Atp6ap1	GTGTCATTGTAACTCACAGG
Atp6v0a1	GCACCTTGATGAACCAGACG
Atp6v0a1	TGAAATCGAAAACCCGCTGG
Atp6v0a1	ACTTACCGAGAGATTAACCC
Atp6v0a1	GTTTGCACTACGAAGAGGCA
Atp6v0a4	TGCTGACCAGTGTCAACGTG
Atp6v0a4	TGTGGATGGTCCTAAATGAG
Atp6v0a4	CCAGGGTGATCATTTCCCGA
Atp6v0a4	CACGGCTGGTGTGATAAACA

Target.Gene.Symbol	sgRNA.Target.Sequence
Atp6v0b	GCCGGTTATATAGATTCCCC
Atp6v0b	CAGATTCGACCACATGAAGG
Atp6v0b	TATTATCTTCTGTGAAGCGG
Atp6v0b	CCACATCAAAGCGAAAGCCC
Atp6v0c	CTCACCGCTGAAGACCATGG
Atp6v0c	CGAAAAACGAAGAATATTCG
Atp6v0c	GCCCAGCACTCACCTGTAGA
Atp6v0c	TCGCAGCCATGTCAGTCATG
Atp6v0d1	TGGTGATGATGAAAGCGCGG
Atp6v0d1	CAAGTTCAGCTATTGAACGC
Atp6v0d1	TCGATGACTGACACCGTCAG
Atp6v0d1	TACTTGGAGGGATTAGTGCG
Atp6v0d2	ACTGCGCAATAAACTATACA
Atp6v0d2	GATGATTAAAGCGCGTCTGT
Atp6v0d2	GAGCTCCACTTACGTCATGT
Atp6v0d2	CTAGCCAAGTGTCACCCACT
Atp6v0e	ACCCCCGGTTAGGACCCTTG
Atp6v0e	ATCGTGATGAGCGTGTTCTG
Atp6v0e	GGATAAACCAGGGCACGAGG
Atp6v0e	AACTGAACAAGTCACCAACA
Atp6v1a	TGACTGCTGATATCCGACAG
Atp6v1a	AGTCGGCCATCATACTGACG
Atp6v1a	ATGTTGCCCCCACGTAACAG

Target.Gene.Symbol	sgRNA.Target.Sequence
Atp6v1a	CTTACGGGAAAAGGGCATCG
Atp6v1b1	CCATGACCGAATCTACCCCG
Atp6v1b1	ATGAATACTCACTGACTCGG
Atp6v1b1	CACTCCTCTGAGTACCATCA
Atp6v1b1	GGCTGGGCTCCCCCACAATG
Atp6v1b2	TCTGGATAGATCCGACACTG
Atp6v1b2	GTCCACTTGACATTACCAGA
Atp6v1b2	TGCTGGATTACCACACAACG
Atp6v1b2	AGCCTACAAGACTGTCTCTG
Atp6v1c1	TTTGCTAACGCGAAGCCTGG
Atp6v1c1	GATATTTAGCCATATCCCAC
Atp6v1c1	TCGATAATGACCTAAAGTCT
Atp6v1c1	TCCCTTGTAGGTTGGCACGT
Atp6v1c2	GAGACCCTCCTGGCTAACGG
Atp6v1c2	TCTCCCTAGATTGATCGCCG
Atp6v1c2	ACTGAGCGATATTGTCAGCA
Atp6v1c2	TTTCTTATCAGACAGCAACC
Atp6v1d	GAACTGACCGGTTTAGCCAG
Atp6v1d	TAGGGCACAGACCATCATGA
Atp6v1d	CTGAGGCCAAATTCACAGCA
Atp6v1d	GCGGAATTATGCCAAAGCAG
Atp6v1e1	CCAACTTGATGAATCAAGCA
Atp6v1e1	TTTGTAGGATCTGCTAAATG

Target.Gene.Symbol	sgRNA.Target.Sequence
Atp6v1e1	TCAGTCTTTGCGTTTGCACA
Atp6v1e1	AGGCATCCAAGCATACCTGA
Atp6v1e2	TCTCATCTTAGAATTGCTCA
Atp6v1e2	GAGAAACCAGGCTCGCATCA
Atp6v1e2	CGGCAGCGGACAATCATCAC
Atp6v1e2	GCACCGCAGACTCCACCAGG
Atp6v1f	GGGCAGAGGTAAGCTAATCG
Atp6v1f	CTACCAGGAAATTAGGGTGG
Atp6v1f	TTTCTAAACAGGGATGACAT
Atp6v1f	CAACCAGTACATCGCAGAGA
Atp6v1g1	TTGAAACAGGAAAGAACCGG
Atp6v1g1	GGCCGCCGAGAAGGTGTCCG
Atp6v1g1	ACTCCTTCTCCCTCTGCAGG
Atp6v1g1	GTTCAAGGCCAAGGAAGCTG
Atp6v1g2	GGAGGTGGAGCAATACCGCA
Atp6v1g2	GAGGAGCTGCTGGATACCCT
Atp6v1g2	CCCAGGCCATGGGCTCTCAG
Atp6v1g2	CCGGCGACTGAAGCAGGCGA
Atp6v1g3	GCTCTTCTATTTCATCCGAG
Atp6v1g3	GGCCAAGGACAAGCTAGATG
Atp6v1g3	CAGGAAAAGGAAAGCGACTG
Atp6v1g3	GGACCAGTACAGAATGCAGA
Atp6v1h	GAATGATATTATAGCGACGA

Target.Gene.Symbol	sgRNA.Target.Sequence
Atp6v1h	CTGCAGCATATCGTCAACCA
Atp6v1h	GGATCCTGGCGATTCAACAT
Atp6v1h	TCATAGCCAGAGCATACTCT
Cox10	TCTGTCCCGGAAGCCAAATG
Cox10	GGGAGTGAATCCACTCACAG
Cox10	TATACAGGGATTGCCACACA
Cox10	AGTTGGCAGCACAGGATGCG
Cox11	GAGCCGATAGAGGGGCACCG
Cox11	GGGACATGGAAGCGCCCGTG
Cox11	ACGTTCATGCCAGTCTCCAG
Cox11	CTCAGACCAGATCGAGAACA
Cox15	AGAAAGGGTTGGCTCAACCG
Cox15	AGGCGGTACTGACTGACCCG
Cox15	GGTACATGGAATACTCACAC
Cox15	TAGGGTGGCGTCCAGAACAC
Cox17	CCAAGAAGGCGCGTGATGCG
Cox17	TGGAAAGATGCCGGGACTGG
Cox17	CGCTAGCCCTGCCCCGCCCG
Cox17	TGCCTGCCCGGAAACCAAGA
Cox4i1	TGCTCGCGACCGGAAGAACG
Cox4i1	CACGCCGATCAGCGTAAGTG
Cox4i1	AGCTTCGCCGAGATGAACAG
Cox4i1	GGCAGACAGCATCGTGACAT

Target.Gene.Symbol	sgRNA.Target.Sequence
Cox4i2	GGGCGTAGCAGTCAACGTAG
Cox4i2	CCAGCGCTCCTATCCCATGC
Cox4i2	GGACAGGACTCAGAACTAGA
Cox4i2	CTTCTGCACAGAGCTCAGCG
Cox5a	CCGTCGCTGTACCGCAGCCG
Cox5a	CCCATGAGAATAGCAGCGAA
Cox5a	TGAGGAGTTTGATGCTCGCT
Cox5a	CTGCATTGCGAGCATGTAGA
Cox5b	TAGCCTGCTCCTCATCAGTG
Cox5b	AAAGGCAGCTTCAGGCACCA
Cox5b	TCACGTACCTCCAGAAGCCA
Cox5b	ATCATGATAGCAGCACAGAA
Cox6a1	TGAGGGTAGGCAACGAACGG
Cox6a1	CCGTGGGCGCCACTCGACAT
Cox6a1	CGCCGCAGCTCGGATGTGGA
Cox6a1	TCAACGTGTTCCTCAAGTCG
Cox6a2	CTTAACTGCTGGATGCACGC
Cox6a2	GCCGGGAAGAGCCAGCACAA
Cox6a2	GGTGATACGGGATGAACTCT
Cox6a2	AGGGAGCAGAGGGCTACGCC
Cox6b1	AAGGCAATGACGGCCAAGGG
Cox6b1	AACTGTTGGCAGAACTACCT
Cox6b1	AGAACCAGACTAAGAACTGT

Target.Gene.Symbol	sgRNA.Target.Sequence
Cox6b1	ACGCCGGTACCACTCACACA
Cox6b2	GTGAAGACCATGAATCGCCG
Cox6b2	ACACGGAAATAGTACTCGCA
Cox6b2	GGGAAGCGCGGATCAAAGGG
Cox6b2	CGTTGTCCATTGGCCCGGAG
Cox6c	TATTGCTGGCGCATTCATTG
Cox6c	AATATGAACCCGCAGACGCT
Cox6c	AGCACATACCTTATAGGCAG
Cox6c	TGGTTTGGGCAACAGCGCAC
Cox7a2	GGGATGCCAGTTCATCTGAA
Cox7a2	GAGCCATTGTGGCTCTGTAG
Cox7a2	ATGTTGCGGAATCTGCTGGT
Cox7a2	CTGGCATCCCATTATCCTCC
Cox7a2l	GCGGCAAAAGTGTACCTGCG
Cox7a2l	GGTGTGGCAAATATGATAGG
Cox7a2l	TGACAGCATATGATTATTCT
Cox7a2l	ATCATATGCTGTCACACTGG
Cox7b	TTATCTGCTCACCTTGGAGA
Cox7b	GGGAATGCTATATTAGCAGG
Cox7b	AACTAGGTGCCCTCTTCTGG
Cox7b	TAGCATTCCCATATTTGTCA
Cox7b2	GCAATATGATGCTAATTAGT
Cox7b2	GTTTAGTGCATATCTGGCCA

Target.Gene.Symbol	sgRNA.Target.Sequence
Cox7b2	CCAAGCATTCTGAAAATTGT
Cox7b2	GAAGAAACTCATGACAAATA
Cox7c	CCGGAGGTTCACGACCTCCG
Cox7c	GCCACTATGAGGAGGGTCCG
Cox7c	TTTCAGTGGAAAACAAGTGG
Cox7c	TCCCCGGACCCTCCTCATAG
Cox8a	GCCTGACCGGCTCGGCCCGG
Cox8a	TTCGAGTGGACCTGAGCCCG
Cox8a	TCTGTGTAGGATATCACCAT
Cox8a	GCTCCCGCGCCGGCTTCGAG
Cox8b	CAAAACTCCCACTTCCGCCG
Cox8b	AGCGCCTGCGAAGTTCACAG
Cox8b	TGGAGCAGCCGCAGGATAGG
Cox8b	CTGTGAACTTCGCAGGCGCT
Cox8c	GCTTCGAGAACAGGACTGCA
Cox8c	AAAAAAAATCCTGTCGCCCA
Cox8c	TTCTCGAAGCCTGGCCACCC
Cox8c	GGCTTTCTGAGTGGCTGAGG
Cyc1	TAGCTCGAACGATGTAGCTG
Cyc1	GGTGGGAGTGTGCTACACGG
Cyc1	AGCTACCCATGGTCTCATCG
Cyc1	GGTCCCGGCAGCTTCCATTG
Ndufa1	CATCCACAAATTCACCAACG

Target.Gene.Symbol	sgRNA.Target.Sequence
Ndufa1	TGTACGCAGTGGACACCCCG
Ndufa1	GAATTTGTGGATGTACGCAG
Ndufa1	CGCGTTCCATCAGATACCAC
Ndufa10	TCGATATAGATGACTGCGTG
Ndufa10	CCACTAAACTCTATGTCGAG
Ndufa10	TGGGAAAAACAAGCTCGCAA
Ndufa10	CTGGAGGCAATGTACAACCA
Ndufa11	CAACCCCGCAGATTCCACCC
Ndufa11	TCTTACCATGAGGTCCCCGA
Ndufa11	GGCCGGTACACATTCACTGC
Ndufa11	AGCGGAGCCGATTATGCCTG
Ndufa13	GGTTCCGCTTGTAGTCGATG
Ndufa13	ACTGACCCGACAGTCCCCGG
Ndufa13	GATTCTCCGGGAAAACCTGG
Ndufa13	GTGGAACCAGGAGCGCAGGT
Ndufa2	GCAGGGATTTCATCGTGCAA
Ndufa2	TCTGATCCGCGAATGCTCGG
Ndufa2	ATTCGCGGATCAGAATGGGC
Ndufa2	GGCTGCCGCTGCTAGCCGAG
Ndufa3	GCCACACCCTACAACTACCC
Ndufa3	TGCTAGCATACTTGGTGTAG
Ndufa3	CATGGGCATAATTATAGCTG
Ndufa3	GTATGCTAGCATGATCAACA

Target.Gene.Symbol	sgRNA.Target.Sequence
Ndufa4	AAAGACCGTGAACTTACGCT
Ndufa4	AGCACTGTATGTGATGCGCT
Ndufa4	CACTGTTTAATCCAGATGTC
Ndufa4	TCTTCGTATTTATTGGAGCA
Ndufa5	GGTGTGCGACACTCCACACG
Ndufa5	TTAGAAGCCTTGCTTCAGGG
Ndufa5	CGCACACCGCCAACCCCACC
Ndufa5	GAAGCTGGATATGGTCAAGG
Ndufa6	GCACCTCCCGATACCAAGCG
Ndufa6	ATATCACGGTGAAACAAGGA
Ndufa6	ACTGAAAATGGGCTTCACCG
Ndufa6	ACCTGAACGAGGCCAAGCGG
Ndufa7	AGGGAGGCACAACTTCCCGG
Ndufa7	CTCGCGTTATCCAAAAGCTG
Ndufa7	CCACCTCCGAAACTCCCCGT
Ndufa7	GCTACCAGGAGATCGCCAAG
Ndufa8	AGCTGCCGCCCATCACTATG
Ndufa8	GCAGATAAAGAGTCACTGTG
Ndufa8	GGAGTTTATGCTGTGCCGCT
Ndufa8	AAAGTTTGACCAGTGTGTGC
Ndufa9	GGTTAACAACGTATCGACCC
Ndufa9	CCAGGTCACCCATCAGACGA
Ndufa9	GATGCCTGAGCTATTGCTCG

Target.Gene.Symbol	sgRNA.Target.Sequence
Ndufa9	GTCATACCTCACGGGAAAGG
Ndufab1	GGCCGCGCCAAGGCCAACGT
Ndufab1	CACCTGCGCGAGCGCCAAGG
Ndufab1	GATTCCGTCTAACGTCAGTG
Ndufab1	TGATAAGATTGATCCAGAAA
Ndufb10	GAAGGCCTACGACCTCGTCG
Ndufb10	GCACTCGACGGTACTGTCGG
Ndufb10	GCGGCGAGGGAGCAGGCGTG
Ndufb10	GAAGGCTTGTCAGCAGAGGG
Ndufb11	TGTAATCGCCCCATCCGGTG
Ndufb11	GGACGAAAACGTCTACGCGA
Ndufb11	TATTCCAGACGTCCACCACA
Ndufb11	GTCGCTGCCTGTCAGCAGCG
Ndufb2	ACATATTCAGCCCCGGTACA
Ndufb2	GCGGCCGAAAGGTACCAGAC
Ndufb2	GTACCTTTCGGCCGCGTCGG
Ndufb2	GAACTCACCCTGGATCACCT
Ndufb3	GCTGGACATGGACATGAACA
Ndufb3	AACTTCCAGATTACAGACAG
Ndufb3	GACTCATCTTACCGAGCCCA
Ndufb3	CATGGACATGAACATGGACA
Ndufb4	CGATGTGCGACACGCGTTTG
Ndufb4	GAGACACGTCATACTCGGCA

Target.Gene.Symbol	sgRNA.Target.Sequence
Ndufb4	GGTCGAGCGCTTGAGCATAA
Ndufb4	TAGGTCCAGCGAATCAAGGC
Ndufb5	CTCCGAGTCTAGGACCAGCG
Ndufb5	AGTTATAATTGGCATAACAC
Ndufb5	ACTATGACGCTCGCTTCTTG
Ndufb5	CGGGCGATCCATCTTGATAT
Ndufb6	TAATAGTGAACAAACCACAT
Ndufb6	GTTATCCCAGAATCGCTCCA
Ndufb6	CGGGGCCGTGTGGAAGAACA
Ndufb6	ACACGCCGGATGAGAAGCTG
Ndufb7	GGAAGCTGGGTATCTTCTCG
Ndufb7	CTCACCACTCCCCACAGTGA
Ndufb7	CCTTGCGCTCCGGAAAGCCG
Ndufb7	AGGCATCCCACAGATAGCGC
Ndufb8	GGGGTCCTAGGATATGACCC
Ndufb8	CAAGAAGTATAACATGCGAG
Ndufb8	CATGTACATCAGGAATCGTG
Ndufb8	CAACCGATCACAGCATGAGA
Ndufb9	TGTGGATACACCATGACTCG
Ndufb9	GTAGCACTCATATCTCTCGA
Ndufb9	AGAATGAGAAGGATATGATG
Ndufb9	AGGATACATTGCTTTCTCAG
Ndufc1	TTGGCAGTTGGACTGTCCGT

Target.Gene.Symbol	sgRNA.Target.Sequence
Ndufc1	CGAAAACGAGCGCAGCACTA
Ndufc1	CACGGTCGAAGTTCTATGTC
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Ndufc2	CAACATGCTGCGGATGCGAC
Ndufc2	AAAGTATCCAGCAAAGACAA
Ndufc2	AGGACGTAACGAACAGAAGC
Ndufs1	AATGGATCTCTGATAAAACC
Ndufs1	TGTCCTATTTGTGACCAGGG
Ndufs1	TAGAGGTTAGGGCCCCTACA
Ndufs1	TGATGGTCAGTCTGTCATGG
Ndufs2	GCGGCGTATATCCGACCTGG
Ndufs2	TAGCACTCACCATTCCAAGG
Ndufs2	CCTCGGGCACAGTGGATCCG
Ndufs2	CACATCGGGCTCCTGCACCG
Ndufs3	TTGTGGGTCACATCACTCCG
Ndufs3	TACGTGCTGCCACAGCACGG
Ndufs3	CAGCGTTGGGATGACTCCAT
Ndufs3	GGGTGTCAGCTCATCTGCAT
Ndufs4	CCTGGATGGAACTCTACAGA
Ndufs4	AGAGCACATCAAAACCAGAA
Ndufs4	GTTGATGCCCAACCCATCAA
Ndufs4	GTTGTCTGCCAGCTTCCAAG

Target.Gene.Symbol	sgRNA.Target.Sequence
Ndufs5	TTCAAATGCGTGGCACCGAG
Ndufs5	GCCACGCATTTGAAAAAGAG
Ndufs5	AGTGGATAGAGTGTGCACAC
Ndufs5	CTTGACATACAGAAAAAGCT
Ndufs6	GGGGTTCAAGTGTCGCCGAG
Ndufs6	CGAAACCCCGTGCAGCCCTG
Ndufs6	TGGGGAGAGTCAACAGCCGG
Ndufs6	TGATGAAAAAGACTACAGGA
Ndufs7	AAGCGGTCCATGTCATAGCG
Ndufs7	CATCAGAGTGTAGCCACTGA
Ndufs7	TGGCACGCTTACCAACAAGA
Ndufs7	CCCGGCGTGCCCAGTTGATG
Ndufs8	ATGTGGACAGAACTCATCCG
Ndufs8	TCAGTGGGCCCTTCTCAAAG
Ndufs8	AAGCCTTCATAGCAGCGCAG
Ndufs8	CCGAGCTGCATTGTCAGTTG
Ndufv2	ATTCAATACCTTGTTCATAG
Ndufv2	AAGGTGTAGTAGTGCAGACC
Ndufv2	TAGTAAAAAACTACCCAGAA
Ndufv2	CTCTTACCCACTGAGCAGCG
Ndufv3	AAGACACAAAGTGTGCTCAA
Ndufv3	GAGAACTGGTTTCTGTAGTG
Ndufv3	AGAGTCAGAGAAGAGTGCAA

Target.Gene.Symbol	sgRNA.Target.Sequence
Ndufv3	AGGACGGATCCGGGCGCTGA
Sdha	GTCAGTTACCTCAACCACAG
Sdha	TTCTACTCAATACCCAGTGG
Sdha	TGCACAGTGCAATGACACCA
Sdha	ACTGTGCATTACAACATGGG
Sdhb	TGCGCCATGAACATCAACGG
Sdhb	ACAGTATCTGCAGTCCATCG
Sdhb	ACCTCGAATGCAGACGTACG
Sdhb	TAGAAGTTACTCAAATCCTG
Sdhc	TACTTGTAGATAGTCAAATG
Sdhc	TCTGGAATAGCCTTGAGTGG
Sdhc	TTTGGGAACCACAGCTAAGG
Sdhc	CAGGAAGCAGCAGTGCCGAC
Sdhd	GCAGAGAGGACATACAGTGG
Sdhd	AGGACCAGCCTACCCAAGGA
Sdhd	TGCAGTGGCCAAGGAGCTCG
Sdhd	AGGGATTCAAGTACCCAGCA
Tcirg1	ACACAAGTGCCTCATCGCGG
Tcirg1	TCTCCCGAAAGCTGGCAATG
Tcirg1	CAGCCACACTCCAACCTGAG
Tcirg1	CGCTACAGGGAAGTTAACCC
Uqcr10	GAAGGCTCGCTCGAAGAACA
Uqcr10	GGGCAAAGGTGGAAGTTCTG

Target.Gene.Symbol	sgRNA.Target.Sequence
Uqcr10	AGCAAGGAGTACAGGCGCGA
Uqcr10	TTCGAGCGAGCCTTCGATCA
Uqcr11	GAACTGGCCAGAAACTGGTG
Uqcr11	CCTACCAGGATTCCCACAGC
Uqcr11	CAGGATCAGCCGCCAGTCCG
Uqcr11	CTGGCCAGTTCCCGGTAGCG
Uqcrb	ATGCCTCATAGTCAGGTCCA
Uqcrb	GCTGCAGGATTCAATAAACT
Uqcrb	TAGTTTCAGCATCAAGCAAG
Uqcrb	AGCCATAAGAAGGCTTCCTG
Uqcrc1	AGCATGCGAGGACTGCTCCG
Uqcrc1	AGACAACGTGACCCTCCAAG
Uqcrc1	TCACTGCCAGTGAAGCGACA
Uqcrc1	ACAGACATTACAAAGCCCCC
Uqcrc2	AACAAGCCGATTCTTGACAG
Uqcrc2	ACAGTACAAAGGATTAGCCA
Uqcrc2	CATCTTTCAAGATAACCCGT
Uqcrc2	GCAAAAGCCAAATACCGTGG
Uqcrfs1	CTTGATCTCGATCTTCGACA
Uqcrfs1	TGCTTATGCGGCCAAAAATG
Uqcrfs1	CTCACCGTTCAGGCCCACCG
Uqcrfs1	CGCTTCACATCCAGAACAGG
Uqcrh	TGGATCTGGAGACCCCAAAG

Target.Gene.Symbol	sgRNA.Target.Sequence
Uqcrh	GACGAACGAAAGATGCTCAC
Uqcrh	AATCCTCTTCTGTCTGTGAC
Uqcrh	GCTCTCTCACTGTTGTTAGG
Uqcrq	GATCCCTACAGCGTTTGTAG
Uqcrq	CTCAAAGGGCGACAAGCTGT
Uqcrq	GCAGGATGCGCTCGCGAGTG
Uqcrq	TTTGCTGAAATAGCTTGGGA
Cox7a1	GACCTCCCAGTACACTTGAA
Cox7a1	AAGCCACTTAGAAAACCGTG
Cox7a1	TGGTAGATGAGCTAAAAGAC
Cox7a1	AAAAGACCGGACCAGAGCCT
Ndufv1	CCCACAGGTAGCTATCCGAG
Ndufv1	CGGATCTTTACCAACCTGTA
Ndufv1	CCTCGTTGTAGAATTCCCCT
Ndufv1	GCCGCCTATATCTACATCCG
Ndufa12	CCTACCTGAAGAAAACCCGT
Ndufa12	CCCACTCAGGCCGCCACCGA
Ndufa12	CCTGCTGCACGCCGCGCTTC
Ndufa12	CTTAAAGGGCAAATGATATA
Atp5f1	GCGGCCGCGTTCTTCAGACA
Atp5f1	CTACCCTCTGCACATCGAAG
Atp5f1	CAGTTCCTTTACCCTAAGAC
Atp5f1	AGCCCCGTGTCTGAAGAACG

Target.Gene.Symbol	sgRNA.Target.Sequence
Atp6v0a2	TGAAGAGCTCGAACGAATAC
Atp6v0a2	CAACAGAGAGTCGTTCTCTA
Atp6v0a2	CTACAGCTGCATGCAGCGGC
Atp6v0a2	TCTTCGTGACCCTCAGCATG
BRDN0000737434	AAACTCCCGTGTCAACCGAT
BRDN0000737467	AAACCTAGCGTAGATTCGGC
BRDN0000737505	AAAAAGTCCGCGATTACGTC
BRDN0000737609	AAACTCATACGTAGCGAATC
BRDN0000737637	AAAACGTAATTATACCGAGC
BRDN0000737693	AAAACGGCTCGATCGGTGAT
BRDN0000737801	AAACCCCCGCGCGGAGCGTC
BRDN0000737848	AAACGAGGCTGTTCGTACAC
BRDN0000738185	AAAATTGCACCTTCCCGGCC
BRDN0000738254	AAAGACGTGCATTCAGCGAG
Tsc2	TGAACCACATGGCTATGACG
Tsc2	CACAGGGTGATAATGAACAG
Tsc2	CAGCTCCAAAGACCCTTGAG
Tsc2	CTGATCCTAGCACACATGTG
Rheb	AACAAACTGAATTGTCAATG
Rheb	CCATATCCAACAACTTGCCA
Rheb	TTCAGCTTGTAGACACAGCG
Rheb	TCATAGGATACCTATTATGT