Fig. 1A

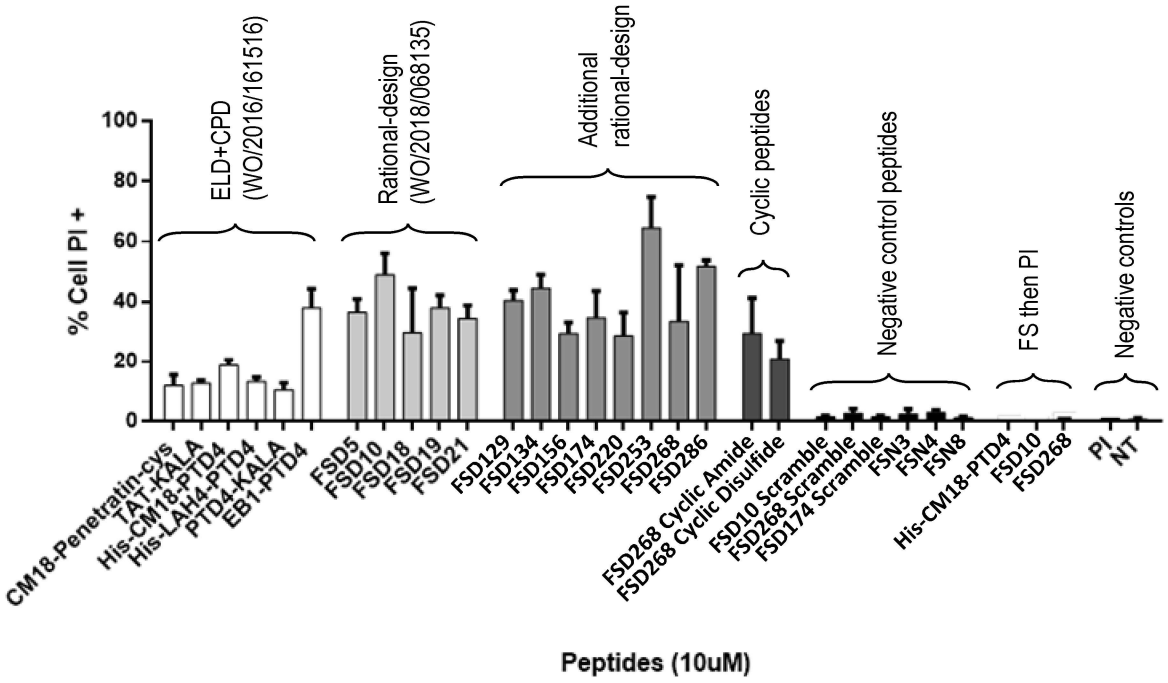

% Cell PI +
100
80
60
40
20
0
ELD+CPD (WO/2016/161516)
Rational-design (WO/2018/068135)
Additional rational-design
Cyclic peptides
Negative control peptides
FS then PI
Negative controls
CM18-Penetratin-cys
TAT-KALA
His-CM18-PTD4
His-LAH4-PTD4
PTD4-KALA
EB1-PTD4
FSD5
FSD10
FSD18
FSD19
FSD21
FSD129
FSD134
FSD156
FSD174
FSD220
FSD253
FSD268
FSD286
FSD268 Cyclic Amide
FSD268 Cyclic Disulfide
FSD10 Scramble
FSD268 Scramble
FSD174 Scramble
FSN3
FSN4
FSN8
His-CM18-PTD4
FSD10
FSD268
PI
NT
Peptides (10uM)

Fig. 1B

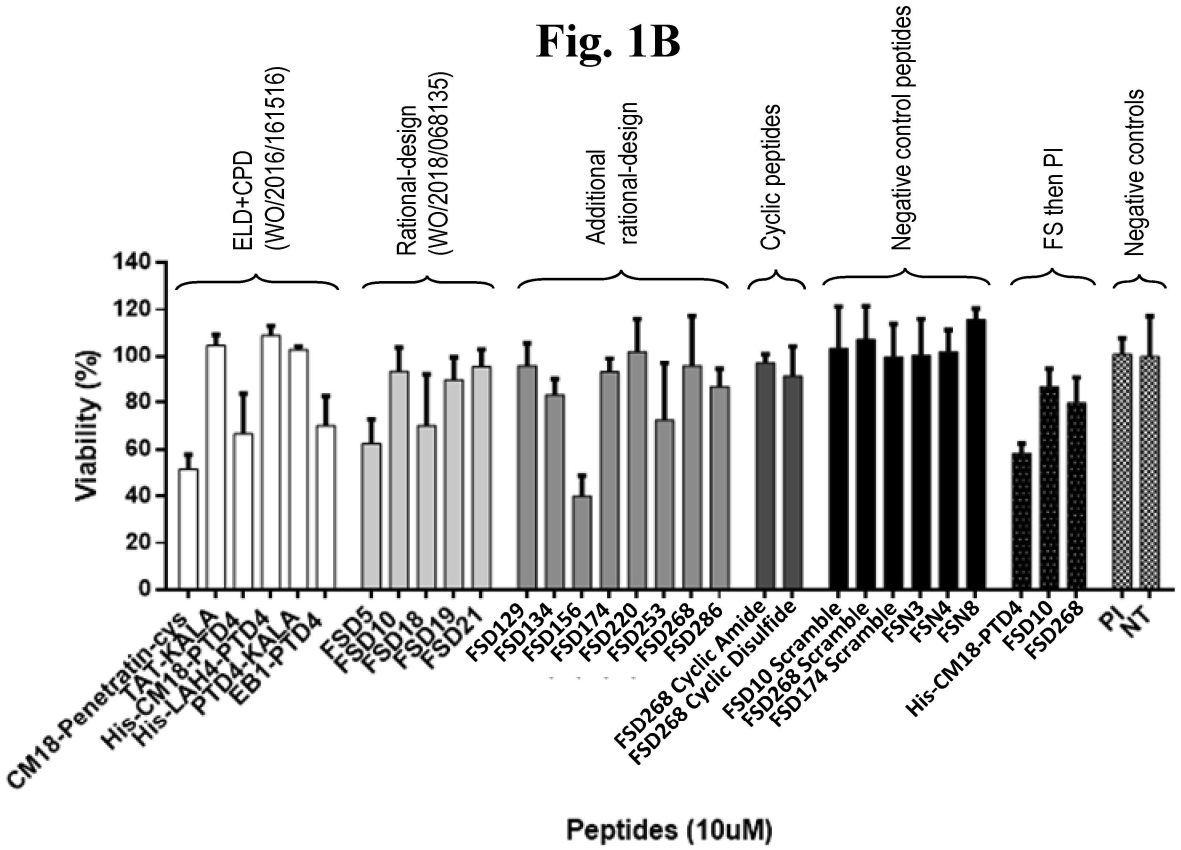

Viability (%)
140
120
100
80
60
40
20
0
ELD+CPD (WO/2016/161516)
Rational-design (WO/2018/068135)
Additional rational-design
Cyclic peptides
Negative control peptides
FS then PI
Negative controls
CM18-Penetratin-cys
TAT-KALA
His-CM18-PTD4
His-LAH4-PTD4
PTD4-KALA
EB1-PTD4
FSD5
FSD10
FSD18
FSD19
FSD21
FSD129
FSD134
FSD156
FSD174
FSD220
FSD253
FSD268
FSD286
FSD268 Cyclic Amide
FSD268 Cyclic Disulfide
FSD10 Scramble
FSD268 Scramble
FSD174 Scramble
FSN3
FSN4
FSN8
His-CM18-PTD4
FSD10
FSD268
PI
NT
Peptides (10uM)

Fig. 1C

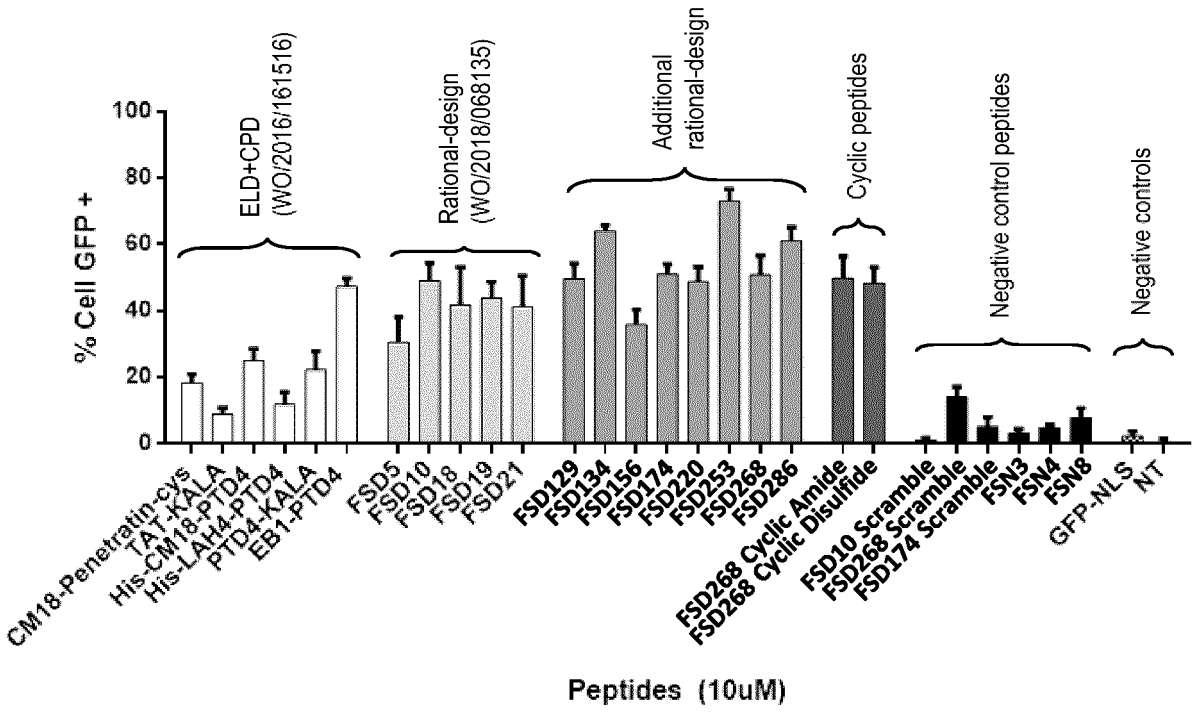

% Cell GFP +
100
80
60
40
20
0
ELD+CPD (WO/2016/161516)
Rational-design (WO/2018/068135)
Additional rational-design
Cyclic peptides
Negative control peptides
Negative controls
CM18-Penetratin-cys
TAT-KALA
His-CM18-PTD4
His-LAH4-PTD4
PTD4-KALA
EB1-PTD4
FSD5
FSD10
FSD18
FSD19
FSD21
FSD129
FSD134
FSD156
FSD174
FSD220
FSD253
FSD268
FSD286
FSD268 Cyclic Amide
FSD268 Cyclic Disulfide
FSD10 Scramble
FSD268 Scramble
FSD174 Scramble
FSN3
FSN4
FSN8
GFP-NLS
NT
Peptides (10uM)

Fig. 1D

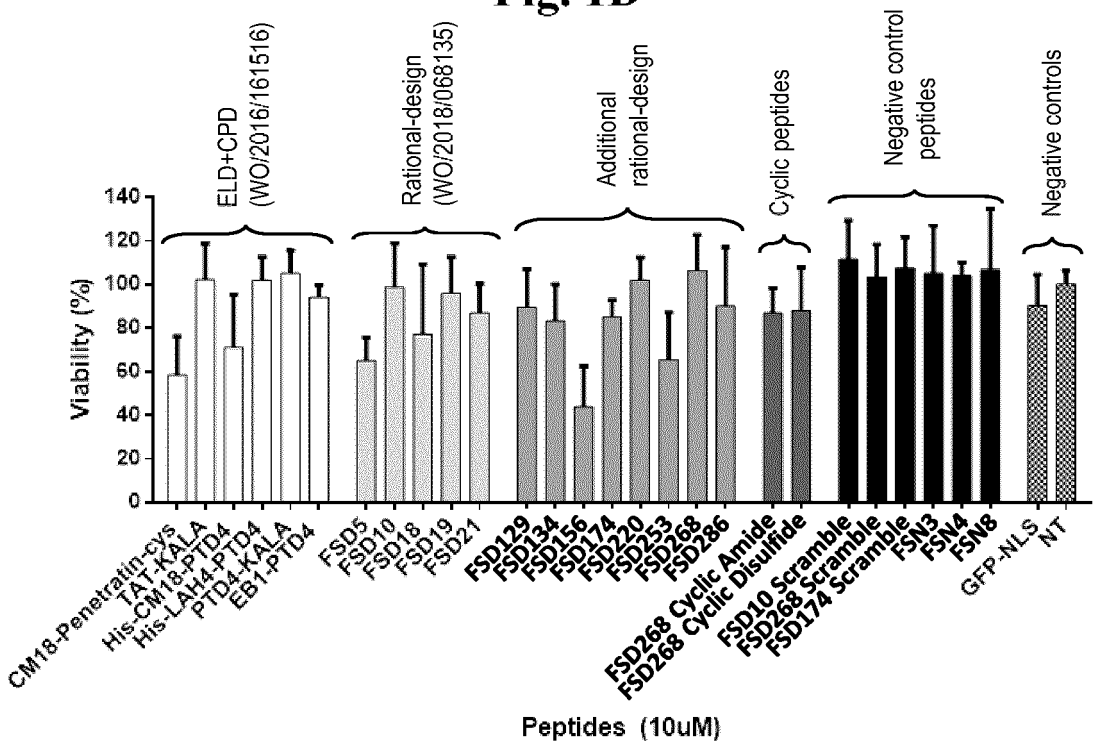

Viability (%)
140
120
100
80
60
40
20
0
ELD+CPD (WO/2016/161516)
Rational-design (WO/2018/068135)
Additional rational-design
Cyclic peptides
Negative control peptides
Negative controls
CM18-Penetratin-cys
TAT-KALA
His-CM18-PTD4
His-LAH4-PTD4
PTD4-KALA
EB1-PTD4
FSD5
FSD10
FSD18
FSD19
FSD21
FSD129
FSD134
FSD156
FSD174
FSD220
FSD253
FSD268
FSD286
FSD268 Cyclic Amide
FSD268 Cyclic Disulfide
FSD10 Scramble
FSD268 Scramble
FSD174 Scramble
FSN3
FSN4
FSN8
GFP-NLS
NT
Peptides (10uM)

Fig. 2

Delivery of PI and GFP in HeLa cells

		SEQ ID NO:	Propidium iodide delivery				GFP-NLS delivery			
Category	**Peptide (10 µM)**	--	**Mean % PI+ cells**	**Stand. dev.**	**Mean % Viability PI+**	**Stand. dev.**	**Mean % GFP+ cells**	**Stand. dev.**	**Mean % Viability GFP+**	**Stand. dev.**
ELD+ CPD (described in WO/2016/161516)	CM18-Penetratin-cys	1	**12%**	4%	**52%**	6%	**18%**	3%	**58%**	18%
	TAT-KALA	2	**12%**	1%	**105%**	5%	**9%**	2%	**102%**	16%
	His-CM18-PTD4	3	**19%**	2%	**66%**	17%	**25%**	4%	**71%**	24%
	His-LAH4-PTD4	4	**13%**	2%	**109%**	4%	**12%**	4%	**102%**	11%
	PTD4-KALA	5	**10%**	2%	**103%**	1%	**22%**	5%	**105%**	11%
	EB1-PTD4	6	**38%**	6%	**70%**	13%	**47%**	3%	**77%**	15%
Rationally-designed synthetic peptide shuttle agents (described in WO/2018/068135)	FSD5	12	**37%**	5%	**63%**	10%	**30%**	7%	**65%**	11%
	FSD10	13	**49%**	7%	**93%**	11%	**49%**	5%	**99%**	20%
	FSD18	15	**30%**	15%	**70%**	22%	**42%**	12%	**77%**	32%
	FSD19	16	**38%**	4%	**89%**	10%	**44%**	5%	**96%**	17%
	FSD21	17	**35%**	4%	**95%**	7%	**41%**	9%	**87%**	13%
Additional rationally-designed synthetic peptide shuttle agents described herein	FSD129	21	**40%**	3%	**96%**	10%	**49%**	4%	**89%**	18%
	FSD134	23	**44%**	5%	**83%**	7%	**64%**	2%	**83%**	17%
	FSD156	26	**30%**	4%	**40%**	9%	**36%**	5%	**44%**	19%
	FSD174	32	**35%**	9%	**93%**	6%	**51%**	3%	**85%**	8%
	FSD220	34	**28%**	8%	**102%**	14%	**49%**	5%	**102%**	10%
	FSD253	37	**65%**	10%	**73%**	24%	**73%**	4%	**65%**	22%
	FSD268	43	**33%**	19%	**96%**	22%	**51%**	6%	**106%**	17%
	FSD286	44	**52%**	2%	**87%**	8%	**61%**	4%	**90%**	27%
Cyclic peptides	FSD268 Cyclic Amide	49	**29%**	12%	**97%**	4%	**50%**	7%	**87%**	11%
	FSD268 Cyclic Disulfide	50	**21%**	6%	**91%**	13%	**48%**	5%	**88%**	20%
Negative Control	FSD10 Scramble	51	**2%**	0%	**114%**	6%	**1%**	1%	**112%**	18%
	FSD268 Scramble	52	**3%**	1%	**110%**	11%	**14%**	3%	**104%**	15%
	FSD174 Scramble	53	**1%**	1%	**115%**	9%	**5%**	3%	**108%**	14%
	FSN3	54	**2%**	2%	**116%**	9%	**3%**	2%	**105%**	22%
	FSN4	55	**3%**	1%	**103%**	8%	**5%**	1%	**104%**	6%
	FSN8	57	**1%**	0%	**110%**	5%	**8%**	3%	**107%**	28%
Peptide then PI	His-CM18-PTD4	3	**2%**	4%	**58%**	4%				
	FSD10	23	**1%**	8%	**87%**	8%				
	FSD268	43	**2%**	11%	**80%**	11%				
Ctrl -	GFP-NLS						**2%**	1%	**90%**	14%
	NT						**1%**	1%	**100%**	6%
Ctrl -	PI		**1%**	0%	**104%**	6%				
	NT		**1%**	0%	**100%**	8%				

Fig. 3

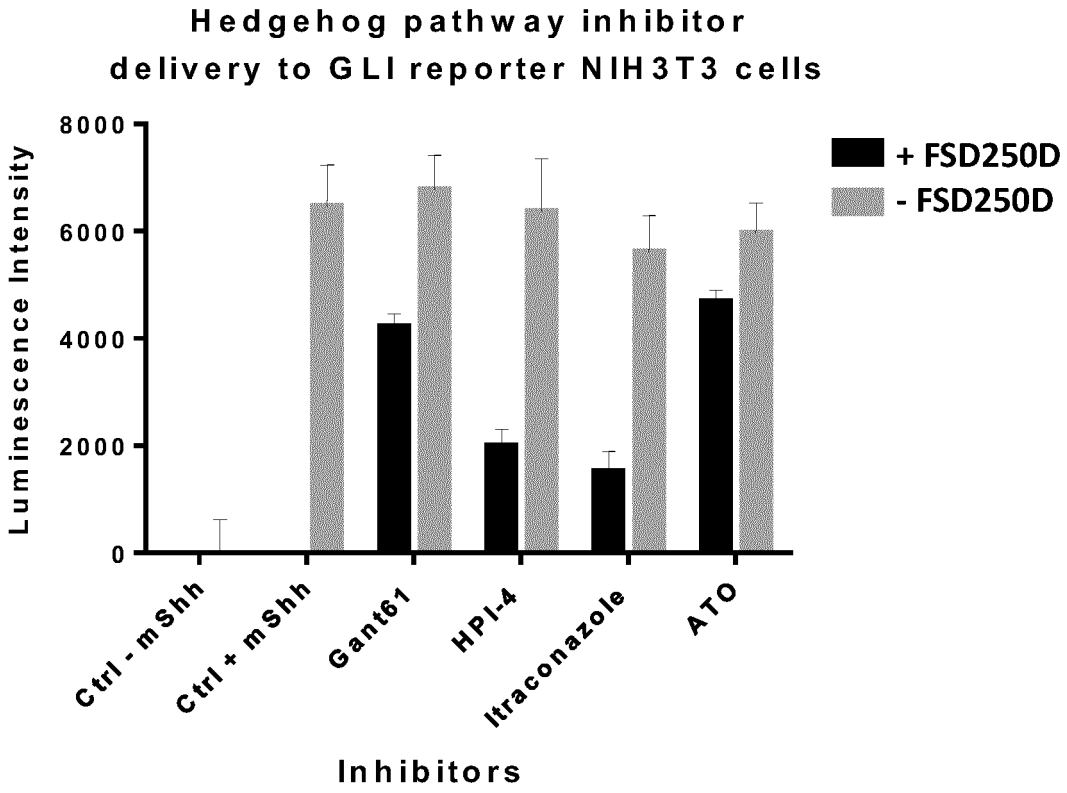

Hedgehog pathway inhibitor
delivery to GLI reporter NIH3T3 cells
Luminescence Intensity
8000
6000
4000
2000
0
+ FSD250D
- FSD250D
Ctrl - mShh
Ctrl + mShh
Gant61
HPI-4
Itraconazole
ATO
Inhibitors

Fig. 4

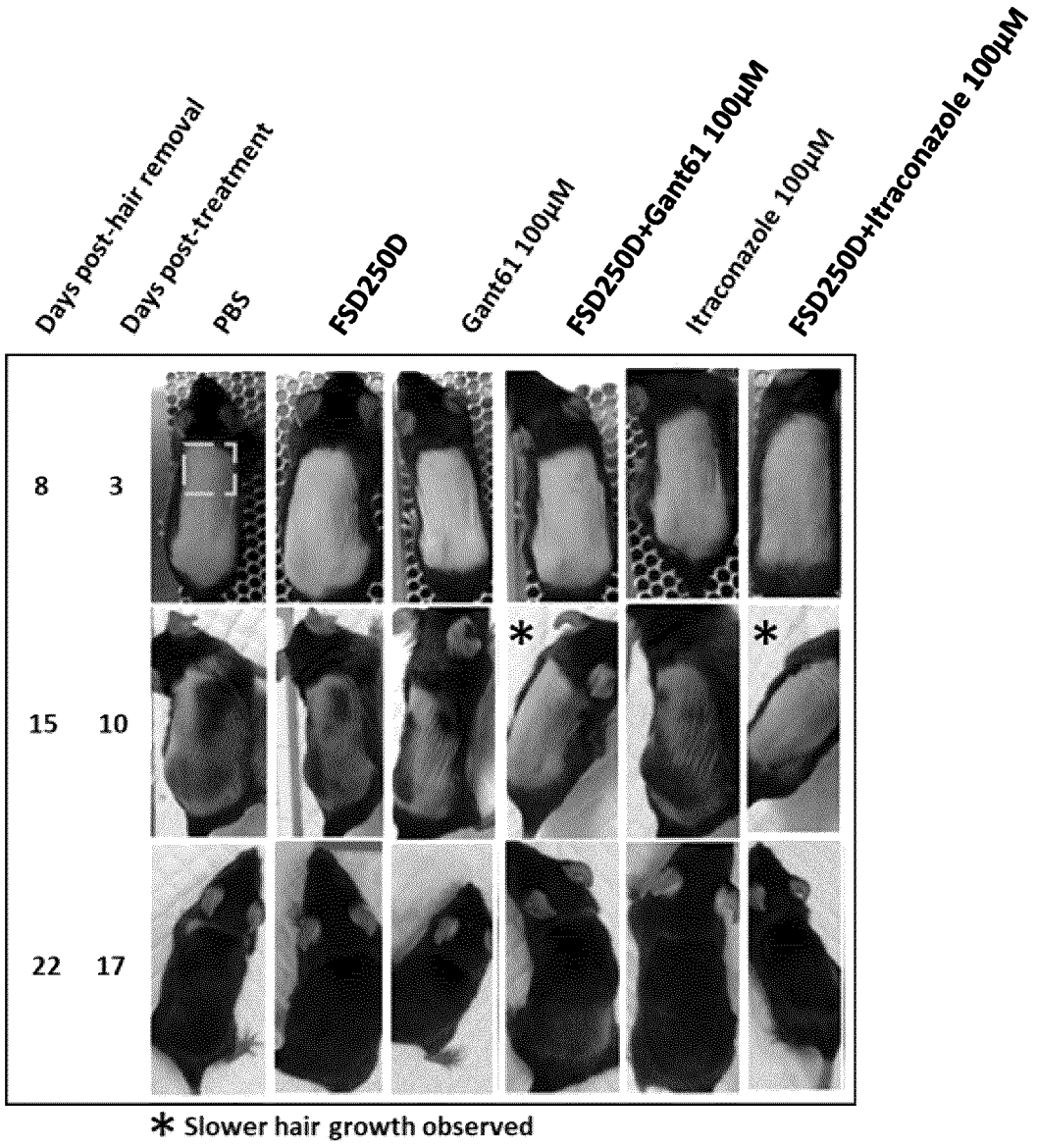
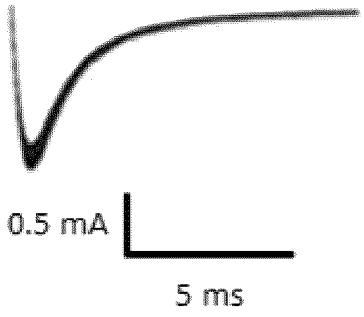
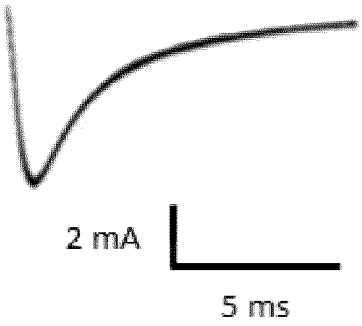

Days post-hair removal
Days post-treatment
PBS
FSD250D
Gant61 100μM
FSD250D+Gant61 100μM
Itraconazole 100μM
FSD250D+Itraconazole 100μM
8
3
15
10
22
17
*
*
* Slower hair growth observed

Fig. 5A



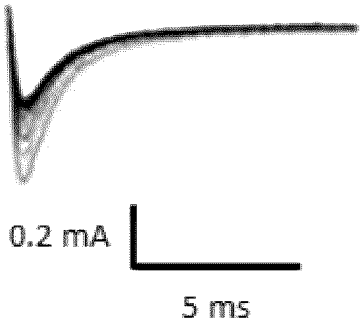
15 µM GFP-NLS
+
5 µM of FSD194

Fig. 5B



2.5 mM QX-314
+
15 µM GFP-NLS

Fig. 5C



1 mM of QX-314
+
15 µM GFP-NLS
+
5 µM of FSD194

Fig. 6

SEQ ID NO	Candidate shuttle agent (10 µM)	Propidium iodide (10 µg/mL)			GFP-NLS (10 µM)			Remarks
		Mean Viability	Norm. Mean Delivery Score[1]	Mean % of PI+ cells	Mean Viability	Norm. Mean Delivery Score[1]	Mean % of GFP+ cells	
237	FSD326	89%	1.7	**10%**	145%	9.5	**27%**	
330	FSD423	79%	1.0	**10%**	106%	4.0	**17%**	
80	FSD144	96%	1.0	**10%**	108%	3.8	**11%**	
317	FSD409	82%	1.1	**10%**	89%	5.2	**10%**	
143	FSD217	61%	1.6	**10%**	115%	8.0	**26%**	
73	FSD137	81%	1.5	**10%**	113%	0.7	**7%***	* 5-fold increase over "cargo alone"
5	PTD4-KALA	103%	7.8	**10%**	105%	29.9	**22%**	Fig. 2
105	FSD178	95%	1.7	**10%**	105%	18.4	**37%**	
306	FSD397	74%	1.6	**11%**	99%	10.4	**30%**	
83	FSD148	80%	1.1	**11%**	113%	5.4	**5%**	* 4.1-fold increase over "cargo alone"
104	FSD177	99%	1.9	**11%**	101%	44.6	**47%**	
109	FSD182	108%	1.8	**11%**	102%	2.5	**10%**	
138	FSD212	92%	2.1	**11%**	95%	11.0	**30%**	
129	FSD203	87%	1.9	**11%**	112%	2.5	**9%**	* 6.5-fold increase over "cargo alone"
332	FSD425	126%	22.9	**12%**	94%	111.4	**27%**	
339	FSD432	110%	31.3	**12%**	87%	266.3	**39%**	
1	CM18-Penetratin-cys	52%	12.1	**12%**	58%	25.5	**18%**	Fig. 2
127	FSD201	98%	2.0	**12%**	110%	5.7	**13%**	
113	FSD186	88%	2.0	**12%**	107%	83.1	**51%**	
2	TAT-KALA	105%	8.4	**12%**	102%	4.6	**9%**	Fig. 2
66	FSD126	93%	1.6	**13%**	107%	7.9	**14%**	
293	FSD384	81%	2.4	**13%**	106%	15.3	**23%**	
242	FSD332	73%	2.0	**13%**	123%	0.9	**5%**	* 3.4-fold increase over "cargo alone"
321	FSD413	45%	1.6	**13%**	82%	5.1	**15%**	
327	FSD419	99%	1.7	**13%**	102%	8.0	**19%**	
341	FSD434	108%	38.1	**13%**	82%	282.5	**43%**	
263	FSD353	66%	2.1	**13%**	123%	1.1	**5%**	* 3.8-fold increase over "cargo alone"

Fig. 6 (cont'd)

SEQ ID NO	Candidate shuttle agent (10 µM)	Propidium iodide (10 µg/mL)			GFP-NLS (10 µM)			Remarks
		Mean Viability	Norm. Mean Delivery Score[1]	Mean % of PI+ cells	Mean Viability	Norm. Mean Delivery Score[1]	Mean % of GFP+ cells	
124	FSD198	93%	2.2	**13%**	106%	3.0	**6%**	* 4.7-fold increase over "cargo alone"
4	His-LAH4-PTD4	109%	11.4	**13%**	102%	7.0	**12%**	Fig. 2
118	FSD191	93%	2.2	**14%**	114%	31.0	**38%**	
165	FSD240	93%	1.7	**14%**	116%	4.9	**18%**	
36	FSD250D	100%	5.4	**14%**	91%	12.9	**19%**	
98	FSD169	105%	2.4	**14%**	89%	75.2	**43%**	
131	FSD205	96%	2.6	**15%**	112%	0.4	**1%**	
128	FSD202	82%	2.8	**16%**	114%	18.2	**39%**	
69	FSD130	94%	2.5	**16%**	114%	25.1	**40%**	
115	FSD188	95%	3.1	**16%**	94%	76.1	**56%**	
133	FSD207	105%	2.6	**17%**	111%	16.2	**28%**	
223	FSD312	90%	1.7	**17%**	98%	1.8	**5%***	* 4.1-fold increase over "cargo alone"
110	FSD183	85%	4.1	**17%**	102%	132.0	**54%**	
228	FSD317	58%	1.9	**17%**	107%	2.6	**6%***	* 4.2-fold increase over "cargo alone"
144	FSD218	111%	3.0	**17%**	115%	8.6	**35%**	
130	FSD204	79%	3.2	**18%**	111%	23.4	**32%**	
117	FSD190	107%	3.7	**18%**	110%	81.2	**45%**	
296	FSD387	58%	3.4	**18%**	94%	74.5	**50%**	
203	FSD292	101%	2.0	**19%**	98%	2.2	**5%**	* 3.7-fold increase over "cargo alone"
3	His-CM18-PTD4	66%	21.3	**19%**	71%	61.2	**25%**	Fig. 2
318	FSD410	88%	3.1	**19%**	45%	14.5	**20%**	
322	FSD414	97%	2.8	**19%**	106%	14.8	**26%**	
299	FSD390	93%	3.7	**19%**	98%	38.5	**45%**	
277	FSD367	69%	4.5	**20%**	150%	31.9	**28%**	
101	FSD172	90%	4.6	**20%**	112%	87.3	**47%**	
161	FSD236	62%	2.7	**20%**	117%	14.3	**23%**	
132	FSD206	89%	3.6	**20%**	96%	49.2	**37%**	
328	FSD421	103%	3.7	**21%**	106%	38.9	**33%**	
70	FSD132	80%	2.9	**21%**	110%	8.2	**17%**	
196	FSD284	116%	2.9	**21%**	95%	10.3	**20%**	

Fig. 6 (cont'd)

SEQ ID NO	Candidate shuttle agent (10 µM)	Propidium iodide (10 µg/mL)			GFP-NLS (10 µM)			Remarks
		Mean Viability	Norm. Mean Delivery Score[1]	Mean % of PI+ cells	Mean Viability	Norm. Mean Delivery Score[1]	Mean % of GFP+ cells	
50	FSD268 Cyclic Disulfide	91%	30.1	**21%**	88%	119.0	**48%**	Fig. 2
274	FSD364	74%	5.3	**21%**	165%	6.7	**17%**	
119	FSD192	96%	4.4	**22%**	104%	69.5	**46%**	
329	FSD422	96%	4.1	**22%**	94%	8.1	**31%**	
67	FSD127	98%	3.5	**22%**	94%	16.6	**16%**	
285	FSD375	57%	8.7	**23%**	150%	62.7	**32%**	
84	FSD149	70%	3.9	**23%**	107%	31.0	**29%**	
303	FSD394	69%	4.7	**23%**	23%	17.0	**25%**	
103	FSD176	80%	6.2	**24%**	99%	148.5	**59%**	
331	FSD424	78%	7.7	**24%**	90%	75.5	**37%**	
177	FSD256	83%	3.8	**25%**	98%	26.1	**41%**	
326	FSD418	107%	5.3	**26%**	91%	70.3	**55%**	
307	FSD398	88%	6.8	**26%**	87%	70.5	**53%**	
338	FSD431	107%	98.9	**26%**	88%	407.0	**50%**	
340	FSD433	104%	45.0	**26%**	90%	247.5	**54%**	
107	FSD180	92%	5.2	**26%**	57%	69.8	**51%**	
78	FSD142	75%	4.3	**26%**	110%	4.9	**10%***	* 7.4-fold increase over "cargo alone"
190	FSD278	101%	3.5	**26%**	103%	39.1	**42%**	
197	FSD285	113%	3.3	**26%**	93%	4.9	**19%**	
146	FSD221	58%	6.1	**26%**	69%	71.5	**46%**	
81	FSD145	103%	2.8	**27%**	107%	2.6	**7%***	* 5.6-fold increase over "cargo alone"
145	FSD219	131%	9.0	**27%**	109%	74.2	**45%**	
308	FSD399	73%	7.9	**27%**	94%	66.3	**49%**	
152	FSD227	60%	6.3	**27%**	91%	116.7	**58%**	
135	FSD209	66%	4.9	**27%**	112%	77.2	**61%**	
111	FSD184	93%	11.1	**28%**	99%	154.3	**62%**	
324	FSD416	106%	8.2	**28%**	101%	48.1	**32%**	
276	FSD366	74%	9.1	**28%**	140%	89.8	**44%**	
195	FSD283	110%	3.0	**28%**	99%	5.7	**27%**	
211	FSD300	89%	3.5	**28%**	108%	3.9	**11%**	
273	FSD363	89%	13.3	**28%**	104%	49.7	**31%**	
34	FSD220	102%	54.6	**28%**	102%	232.9	**49%**	Fig. 2
97	FSD167	103%	5.9	**29%**	59%	81.4	**45%**	
283	FSD373	77%	11.0	**29%**	144%	93.2	**48%**	
313	FSD404	72%	8.4	**29%**	85%	72.0	**54%**	
116	FSD189	100%	7.1	**29%**	86%	185.1	**71%**	
305	FSD396	79%	8.1	**29%**	85%	105.1	**50%**	

Fig. 6 (cont'd)

SEQ ID NO	Candidate shuttle agent (10 µM)	Propidium iodide (10 µg/mL)			GFP-NLS (10 µM)			Remarks
		Mean Viability	Norm. Mean Delivery Score[1]	Mean % of PI+ cells	Mean Viability	Norm. Mean Delivery Score[1]	Mean % of GFP+ cells	
102	FSD175	113%	8.8	**29%**	106%	152.5	**58%**	
298	FSD389	83%	8.0	**29%**	50%	72.5	**41%**	
106	FSD179	108%	5.6	**29%**	91%	77.1	**53%**	
137	FSD211	63%	5.9	**29%**	89%	122.7	**66%**	
49	FSD268 Cyclic Amide	97%	52.1	**29%**	87%	155.4	**50%**	Fig. 2
271	FSD361	67%	13.6	**29%**	95%	97.3	**39%**	
26	FSD156	40%	53.8	**30%**	44%	107.7	**36%**	Fig. 2
141	FSD215	71%	6.6	**30%**	107%	80.8	**54%**	
210	FSD299	94%	3.8	**30%**	94%	16.5	**32%**	
15	FSD18	70%	65.2	**30%**	77%	129.2	**42%**	Fig. 2
31	FSD173	109%	27.8	**30%**	95%	232.4	**63%**	
287	FSD377	63%	10.7	**30%**	159%	36.6	**34%**	
60	FSD119	71%	7.0	**30%**	109%	36.4	**29%**	
100	FSD171	108%	6.6	**30%**	107%	140.5	**65%**	
291	FSD382	94%	11.0	**31%**	44%	93.5	**45%**	
253	FSD343	38%	8.6	**31%**	115%	25.7	**38%**	
76	FSD140	81%	6.9	**31%**	96%	13.1	**19%**	
174	FSD251	93%	6.9	**31%**	85%	149.7	**58%**	
232	FSD321	46%	13.9	**32%**	65%	156.5	**53%**	
153	FSD228	86%	6.3	**32%**	80%	118.7	**67%**	
63	FSD123	85%	13.5	**32%**	96%	86.0	**36%**	
288	FSD378	65%	18.1	**33%**	144%	35.1	**31%**	
239	FSD328	83%	14.1	**33%**	132%	81.9	**53%**	
58	FSD117	99%	5.8	**33%**	122%	46.3	**42%**	
43	FSD268	96%	52.1	**33%**	106%	131.0	**51%**	Fig. 2
112	FSD185	82%	10.6	**33%**	73%	159.1	**61%**	
289	FSD379	47%	10.1	**33%**	76%	87.9	**54%**	
134	FSD208	95%	6.3	**33%**	99%	132.2	**68%**	
311	FSD402	79%	20.6	**34%**	64%	108.2	**41%**	
191	FSD279	89%	6.3	**34%**	103%	17.6	**31%**	
77	FSD141	91%	9.8	**34%**	95%	15.2	**27%**	
17	FSD21	95%	43.3	**35%**	87%	87.8	**41%**	Fig. 2
238	FSD327	98%	12.4	**35%**	95%	73.4	**48%**	
32	FSD174	93%	74.9	**35%**	85%	246.5	**51%**	Fig. 2
284	FSD374	73%	16.3	**35%**	152%	111.0	**49%**	
99	FSD170	91%	15.4	**35%**	87%	166.4	**61%**	
75	FSD139	82%	7.7	**35%**	97%	4.0	**11%**	
136	FSD210	57%	7.3	**36%**	93%	129.5	**74%**	
12	FSD5	63%	39.2	**37%**	65%	57.2	**30%**	Fig. 2
120	FSD193	82%	7.6	**37%**	51%	154.5	**73%**	
33	FSD194	77%	22.6	**37%**	62%	292.4	**78%**	
233	FSD322	55%	25.7	**37%**	132%	117.5	**54%**	

Fig. 6 (cont'd)

SEQ ID NO	Candidate shuttle agent (10 µM)	Propidium iodide (10 µg/mL)			GFP-NLS (10 µM)			Remarks
		Mean Viability	Norm. Mean Delivery Score[1]	Mean % of PI+ cells	Mean Viability	Norm. Mean Delivery Score[1]	Mean % of GFP+ cells	
290	FSD381	72%	16.3	**37%**	66%	115.2	**44%**	
35	FSD250	119%	33.6	**37%**	114%	284.8	**70%**	
71	FSD133	90%	10.4	**37%**	122%	56.2	**46%**	
175	FSD254	85%	10.8	**38%**	92%	111.3	**49%**	
86	FSD151	79%	9.9	**38%**	105%	47.4	**32%**	
16	FSD19	89%	65.4	**38%**	96%	92.0	**44%**	Fig. 2
6	EB1-PTD4	70%	48.6	**38%**	77%	87.8	**47%**	Fig. 2
96	FSD166	61%	10.7	**38%**	29%	87.9	**48%**	
91	FSD160	69%	14.0	**38%**	73%	147.9	**53%**	
159	FSD234	99%	7.5	**38%**	77%	48.7	**31%**	
149	FSD224	62%	8.1	**38%**	81%	93.7	**66%**	
82	FSD147	84%	7.6	**39%**	90%	119.2	**70%**	
151	FSD226	137%	9.3	**39%**	95%	85.8	**61%**	
123	FSD197	48%	10.8	**39%**	73%	174.5	**69%**	
183	FSD267	89%	6.7	**39%**	76%	44.1	**38%**	
68	FSD128	97%	10.6	**39%**	87%	31.7	**33%**	
122	FSD196	98%	12.3	**40%**	60%	140.2	**54%**	
74	FSD239	81%	9.7	**40%**	121%	41.1	**44%**	
164	FSD138	83%	22.9	**40%**	95%	66.9	**64%**	
320	FSD412	118%	10.9	**40%**	71%	63.9	**47%**	
278	FSD368	68%	14.3	**40%**	130%	139.4	**58%**	
167	FSD243	77%	10.6	**40%**	114%	107.6	**61%**	
21	FSD129	96%	69.8	**40%**	89%	195.6	**49%**	Fig. 2
114	FSD187	97%	9.3	**41%**	78%	123.5	**66%**	
59	FSD118	96%	12.9	**41%**	104%	73.6	**45%**	
139	FSD213	56%	16.4	**41%**	104%	161.2	**62%**	
279	FSD369	75%	13.6	**42%**	161%	116.8	**58%**	
126	FSD200	88%	13.2	**42%**	48%	137.3	**56%**	
62	FSD122	80%	14.5	**42%**	99%	76.0	**47%**	
92	FSD161	78%	15.1	**42%**	102%	92.6	**48%**	
323	FSD415	110%	14.8	**43%**	78%	124.0	**56%**	
204	FSD293	100%	13.3	**43%**	90%	8.9	**18%**	
142	FSD216	64%	11.7	**43%**	111%	97.1	**60%**	
22	FSD131	85%	35.5	**43%**	100%	92.0	**42%**	
19	FSD120	80%	46.4	**43%**	109%	119.5	**42%**	
206	FSD295	84%	18.8	**43%**	97%	40.0	**34%**	
166	FSD241	94%	9.4	**43%**	107%	119.3	**60%**	
205	FSD294	81%	16.2	**43%**	86%	167.3	**61%**	
150	FSD225	128%	12.4	**43%**	82%	122.5	**62%**	
275	FSD365	77%	18.3	**44%**	152%	96.3	**58%**	
272	FSD362	89%	22.2	**44%**	114%	53.6	**38%**	
88	FSD153	41%	13.7	**44%**	89%	96.7	**51%**	
154	FSD229	88%	11.0	**44%**	79%	111.2	**63%**	
23	FSD134	83%	53.9	**44%**	83%	126.3	**64%**	Fig. 2

Fig. 6 (cont'd)

SEQ ID NO	Candidate shuttle agent (10 µM)	Propidium iodide (10 µg/mL)			GFP-NLS (10 µM)			Remarks
		Mean Viability	Norm. Mean Delivery Score[1]	Mean % of PI+ cells	Mean Viability	Norm. Mean Delivery Score[1]	Mean % of GFP+ cells	
121	FSD195	85%	13.9	**45%**	83%	177.6	**69%**	
316	FSD408	72%	14.6	**45%**	72%	102.1	**58%**	
87	FSD152	73%	13.7	**45%**	98%	69.6	**41%**	
181	FSD261	88%	17.1	**46%**	95%	168.3	**60%**	
65	FSD125	91%	14.3	**46%**	104%	87.6	**51%**	
61	FSD121	81%	19.0	**46%**	104%	76.2	**44%**	
64	FSD124	88%	15.3	**46%**	98%	79.8	**51%**	
171	FSD248	132%	12.3	**46%**	96%	148.3	**56%**	
244	FSD334	68%	12.8	**47%**	75%	87.0	**80%**	
21	FSD129	104%	13.4	**47%**	117%	61.2	**43%**	
240	FSD330	87%	26.1	**47%**	124%	71.6	**51%**	
93	FSD163	58%	16.8	**47%**	92%	115.5	**59%**	
342	FSD435	41%	119.5	**47%**	55%	339.1	**67%**	
212	FSD301	84%	24.2	**48%**	95%	87.8	**51%**	
198	FSD287	105%	9.8	**48%**	90%	102.6	**57%**	
89	FSD154	79%	18.7	**49%**	102%	44.5	**30%**	
13	FSD10	93%	69.5	**49%**	99%	81.9	**49%**	Fig. 2
94	FSD164	24%	25.4	**49%**	101%	115.7	**55%**	
85	FSD150	82%	17.4	**49%**	109%	88.3	**54%**	
282	FSD372	67%	13.3	**49%**	140%	63.9	**53%**	
26	FSD156	31%	14.5	**49%**	55%	80.0	**42%**	
268	FSD358	77%	26.2	**50%**	120%	94.3	**59%**	
236	FSD325	56%	25.1	**51%**	141%	70.6	**50%**	
95	FSD165	13%	18.3	**51%**	72%	95.3	**55%**	
186	FSD274	76%	14.4	**51%**	91%	134.5	**68%**	
254	FSD344	31%	35.0	**51%**	99%	188.1	**68%**	
44	FSD286	87%	74.2	**52%**	90%	165.5	**61%**	Fig. 2
292	FSD383	74%	30.5	**52%**	21%	91.6	**55%**	
184	FSD269	89%	12.0	**52%**	68%	105.7	**63%**	
245	FSD335	37%	32.9	**53%**	76%	124.5	**68%**	
185	FSD270	79%	16.6	**54%**	103%	172.4	**72%**	
28	FSD159	80%	77.6	**54%**	56%	233.0	**53%**	
29	FSD162	61%	85.2	**54%**	92%	344.2	**66%**	
234	FSD323	90%	27.9	**54%**	38%	90.7	**53%**	
30	FSD168	88%	61.5	**55%**	86%	269.6	**53%**	
180	FSD260	89%	21.3	**55%**	88%	183.0	**69%**	
249	FSD339	86%	23.2	**55%**	92%	95.6	**65%**	
187	FSD275	94%	16.9	**55%**	118%	30.3	**42%**	
23	FSD134	66%	11.8	**55%**	64%	154.7	**65%**	
310	FSD401	99%	28.4	**55%**	93%	144.9	**68%**	
297	FSD388	84%	22.5	**56%**	70%	56.9	**54%**	
90	FSD158	57%	14.6	**56%**	43%	51.7	**37%**	
155	FSD230	96%	13.0	**56%**	121%	72.5	**61%**	
188	FSD276	109%	16.9	**56%**	100%	144.1	**76%**	

Fig. 6 (cont'd)

SEQ ID NO	Candidate shuttle agent (10 µM)	Propidium iodide (10 µg/mL)			GFP-NLS (10 µM)			Remarks
		Mean Viability	Norm. Mean Delivery Score[1]	Mean % of PI+ cells	Mean Viability	Norm. Mean Delivery Score[1]	Mean % of GFP+ cells	
220	FSD309	62%	25.0	**56%**	64%	221.5	**69%**	
182	FSD266	92%	14.5	**56%**	95%	77.6	**55%**	
160	FSD235	95%	13.1	**56%**	104%	79.5	**59%**	
300	FSD391	81%	25.1	**57%**	55%	94.7	**59%**	
178	FSD257	89%	20.3	**57%**	103%	24.5	**37%**	
201	FSD290	101%	30.5	**57%**	69%	229.1	**73%**	
158	FSD233	75%	14.2	**58%**	122%	97.3	**62%**	
280	FSD370	72%	18.2	**58%**	161%	80.0	**61%**	
302	FSD393	52%	24.3	**58%**	61%	59.5	**54%**	
27	FSD157	30%	98.9	**58%**	76%	285.2	**57%**	
251	FSD341	104%	29.4	**59%**	66%	106.8	**65%**	
125	FSD199	90%	15.5	**60%**	14%	28.7	**25%**	
265	FSD355	62%	41.7	**60%**	98%	124.7	**61%**	
266	FSD356	97%	33.9	**60%**	102%	147.8	**71%**	
243	FSD333	39%	30.9	**60%**	69%	197.1	**86%**	
229	FSD318	65%	63.6	**60%**	74%	227.2	**65%**	
168	FSD244	56%	20.5	**60%**	111%	128.5	**69%**	
218	FSD307	61%	26.1	**60%**	97%	107.6	**62%**	
24	FSD146	98%	97.4	**61%**	98%	220.2	**58%**	
281	FSD371	72%	30.6	**61%**	139%	119.7	**53%**	
294	FSD385	88%	37.5	**62%**	31%	105.5	**60%**	
72	FSD135	105%	48.4	**62%**	99%	103.2	**52%**	
264	FSD354	61%	45.7	**62%**	102%	123.5	**64%**	
176	FSD255	85%	18.2	**63%**	105%	81.6	**59%**	
45	FSD271	77%	73.8	**63%**	89%	279.5	**73%**	
226	FSD315	93%	67.4	**63%**	89%	210.8	**66%**	
314	FSD406	65%	28.0	**64%**	75%	174.7	**74%**	
37	FSD253	73%	98.3	**65%**	65%	185.8	**73%**	Fig. 2
39	FSD262	81%	75.6	**65%**	88%	376.1	**77%**	
179	FSD259	95%	26.1	**65%**	82%	141.1	**67%**	
47	FSD273	88%	91.9	**66%**	98%	321.0	**74%**	
315	FSD407	110%	28.9	**66%**	62%	203.3	**80%**	
319	FSD411	110%	27.6	**66%**	65%	200.4	**81%**	
194	FSD282	116%	18.5	**66%**	86%	80.1	**61%**	
156	FSD231	80%	20.5	**67%**	99%	181.3	**75%**	
13	FSD10	100%	13.9	**67%**	104%	119.7	**72%**	
304	FSD395	98%	34.1	**67%**	74%	303.0	**87%**	
231	FSD320	109%	42.9	**67%**	76%	220.4	**72%**	
163	FSD238	89%	30.5	**67%**	107%	189.9	**80%**	
199	FSD288	82%	19.9	**67%**	96%	89.2	**72%**	
40	FSD263	81%	88.7	**68%**	100%	279.3	**75%**	
193	FSD281	107%	54.6	**68%**	85%	201.7	**76%**	
262	FSD352	58%	57.8	**69%**	105%	154.9	**71%**	
38	FSD258	76%	106.2	**69%**	113%	178.6	**62%**	

Fig. 6 (cont'd)

SEQ ID NO	Candidate shuttle agent (10 µM)	Propidium iodide (10 µg/mL)			GFP-NLS (10 µM)			Remarks
		Mean Viability	Norm. Mean Delivery Score[1]	Mean % of PI+ cells	Mean Viability	Norm. Mean Delivery Score[1]	Mean % of GFP+ cells	
267	FSD357	36%	27.9	**69%**	108%	42.1	**44%**	
248	FSD338	52%	40.9	**69%**	65%	169.3	**89%**	
227	FSD316	73%	36.5	**69%**	82%	202.2	**74%**	
255	FSD345	51%	50.8	**69%**	86%	181.2	**78%**	
258	FSD348	76%	38.3	**70%**	108%	68.2	**68%**	
260	FSD350	70%	50.7	**70%**	111%	100.6	**65%**	
189	FSD277	104%	47.1	**70%**	95%	188.3	**72%**	
225	FSD314	87%	36.1	**70%**	90%	119.8	**69%**	
224	FSD313	66%	49.1	**71%**	57%	210.1	**71%**	
157	FSD232	98%	18.2	**71%**	108%	76.2	**69%**	
46	FSD272	85%	99.3	**71%**	97%	332.5	**78%**	
215	FSD304	83%	37.7	**72%**	96%	160.2	**73%**	
208	FSD297	102%	42.1	**72%**	79%	247.2	**81%**	
42	FSD265	86%	102.0	**72%**	80%	404.9	**82%**	
230	FSD319	85%	43.3	**73%**	73%	250.6	**75%**	
207	FSD296	40%	45.7	**74%**	84%	247.4	**82%**	
192	FSD280	100%	26.0	**74%**	104%	86.1	**73%**	
209	FSD298	101%	62.3	**74%**	90%	219.3	**76%**	
169	FSD246	58%	30.5	**74%**	91%	142.8	**66%**	
247	FSD337	92%	57.8	**76%**	66%	186.2	**87%**	
217	FSD306	81%	55.3	**76%**	96%	209.4	**82%**	
214	FSD303	91%	50.2	**77%**	86%	198.0	**77%**	
250	FSD340	51%	60.0	**77%**	85%	169.9	**83%**	
257	FSD347	44%	55.1	**77%**	75%	130.6	**74%**	
216	FSD305	94%	50.1	**78%**	97%	254.5	**86%**	
246	FSD336	63%	42.4	**78%**	84%	164.5	**90%**	
219	FSD308	85%	54.0	**78%**	85%	247.4	**86%**	
269	FSD359	74%	52.3	**79%**	83%	213.1	**82%**	
222	FSD311	43%	47.6	**80%**	74%	211.3	**79%**	
213	FSD302	89%	54.2	**80%**	94%	228.4	**83%**	
221	FSD310	90%	51.4	**81%**	92%	217.3	**81%**	
256	FSD346	84%	58.4	**81%**	70%	193.2	**84%**	
344	FSD438	59%	397.5	**81%**	69%	686.2	**84%**	
200	FSD289	89%	39.8	**82%**	85%	131.1	**75%**	
202	FSD291	102%	44.6	**84%**	77%	234.4	**85%**	
270	FSD360	78%	98.5	**84%**	105%	89.4	**75%**	
259	FSD349	104%	64.3	**84%**	90%	202.4	**82%**	
252	FSD342	83%	59.2	**86%**	37%	92.2	**70%**	

[1] Normalized Mean Delivery Scores were normalized to that of the "cargo alone" control for each experimental batch.

Fig. 7

SEQ ID NO	Candidate shuttle agent (10 µM)	Propidium iodide (10 µg/mL)			GFP-NLS (10 µM)			Remarks
		Mean Viability	Norm. Mean Delivery Score[1]	Mean % of PI+ cells	Mean Viability	Norm. Mean Delivery Score[1]	Mean % of GFP+ cells	
312	FSD403	111%	0.6	4%	94%	1.3	7%	
309	FSD400	55%	0.7	5%	96%	1.4	7%	
295	FSD386	82%	0.9	7%	99%	1.8	7%	
140	FSD214	55%	1.1	7%	113%	2.1	8%	
140	FSD214	55%	1.1	7%	113%	2.1	8%	
325	FSD417	91%	0.8	7%	102%	1.4	8%	
301	FSD392	28%	0.6	5%	92%	3.7	9%	
108	FSD181	106%	1.3	9%	104%	1.9	10%	
286	FSD376	68%	0.7	6%	164%	3.2	12%	
52	FSD268 Scramble	110%	2.0	3%	104%	7.5	14%	Fig. 2
173	FSD250E	104%	0.8	5%	115%	14.1	16%	
343	FSD436	104%	2.4	2%	96%	17.4	19%	
334	FSD427	107%	1.4	1%	77%	17.4	19%	
241	FSD331	75%	1.3	8%	145%	4.9	23%	
336	FSD429	106%	7.8	5%	92%	82.6	25%	
148	FSD223	55%	1.5	9%	99%	9.4	26%	
147	FSD222	55%	1.5	9%	109%	23.7	30%	
333	FSD426	113%	9.6	6%	86%	110.7	30%	
79	FSD143	89%	1.6	9%	103%	39.5	32%	
335	FSD428	111%	11.7	6%	94%	164.6	35%	
337	FSD430	109%	11.2	8%	96%	97.0	35%	
261	FSD351	98%	1.0	7%	120%	31.0	38%	

[1] Normalized Mean Delivery Scores were normalized to that of the "cargo alone" control for each experimental batch.