

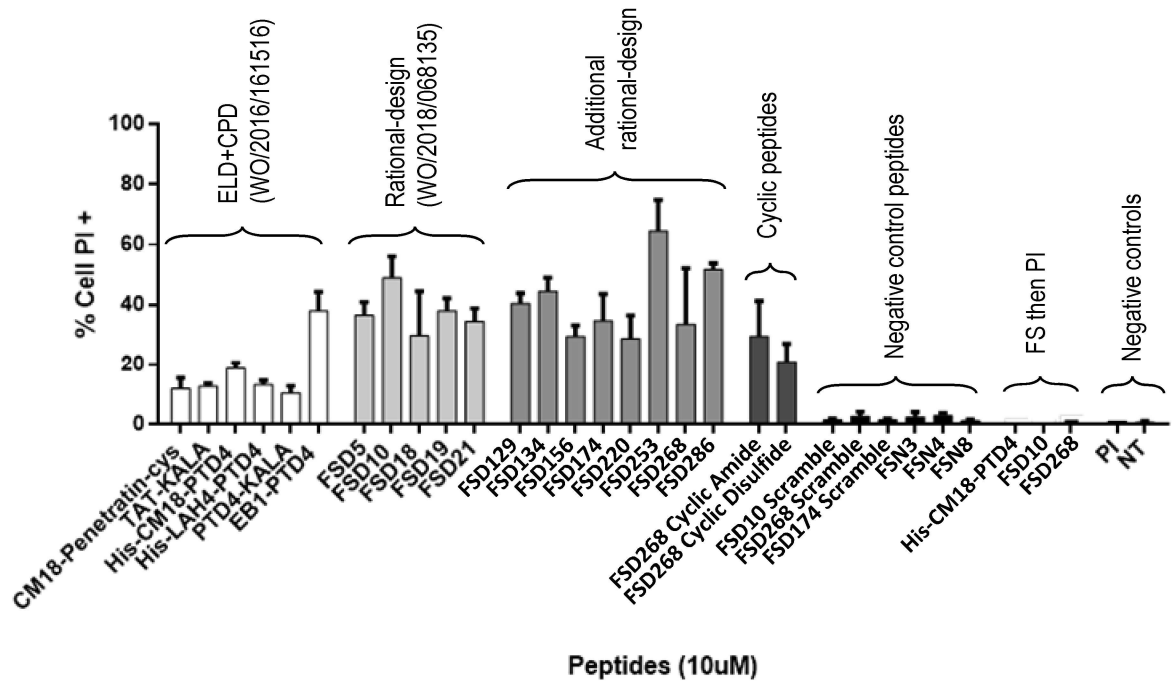
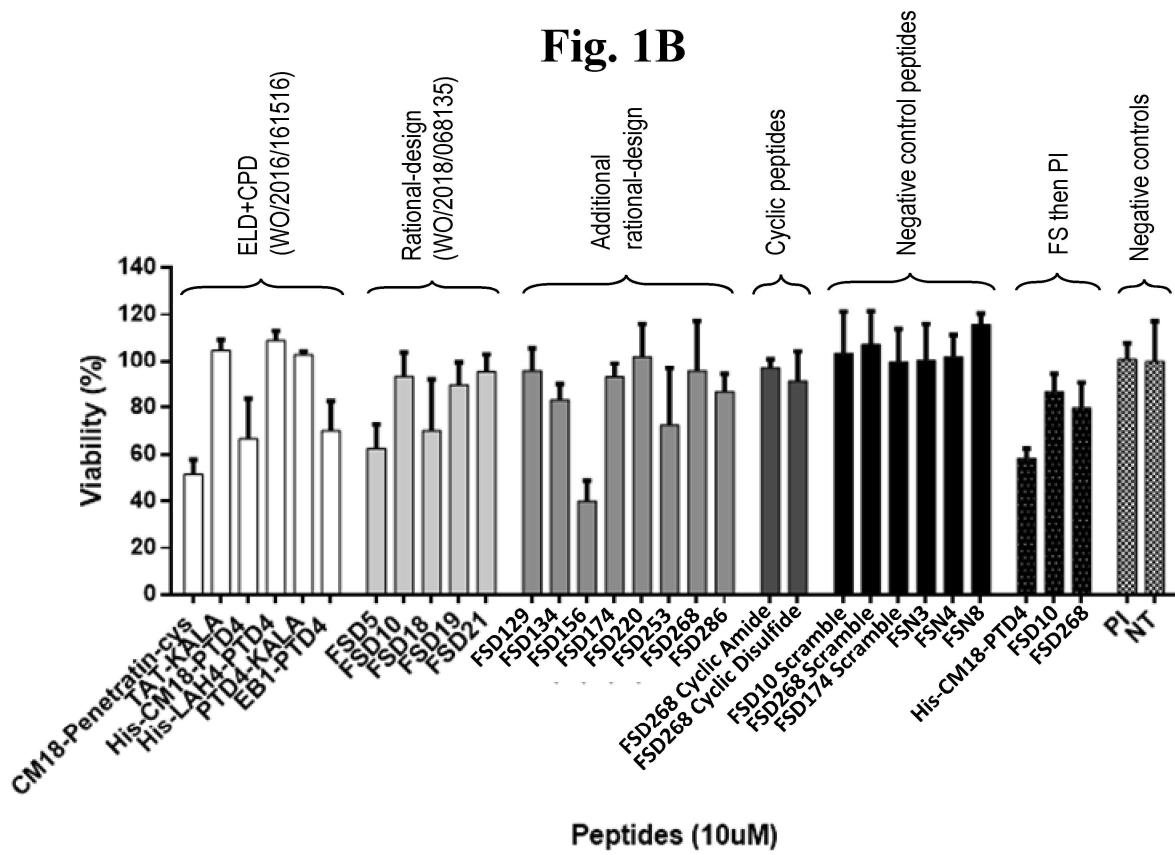
**Fig. 1A****Fig. 1B**

Fig. 1C

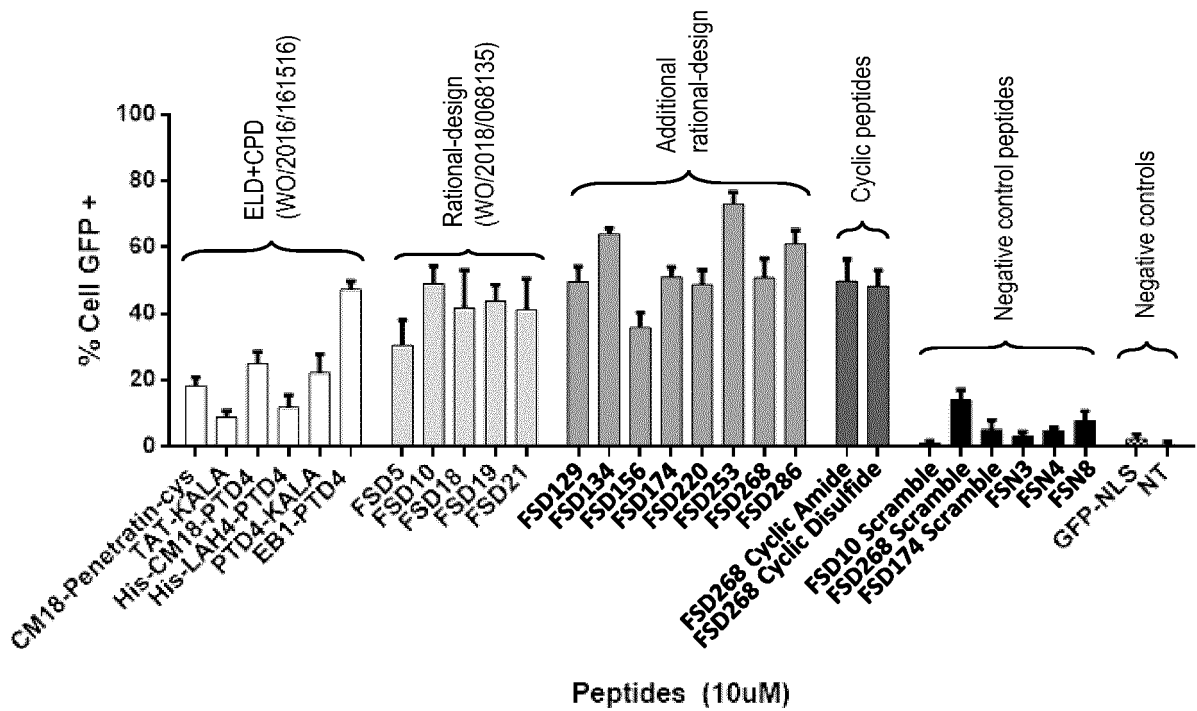
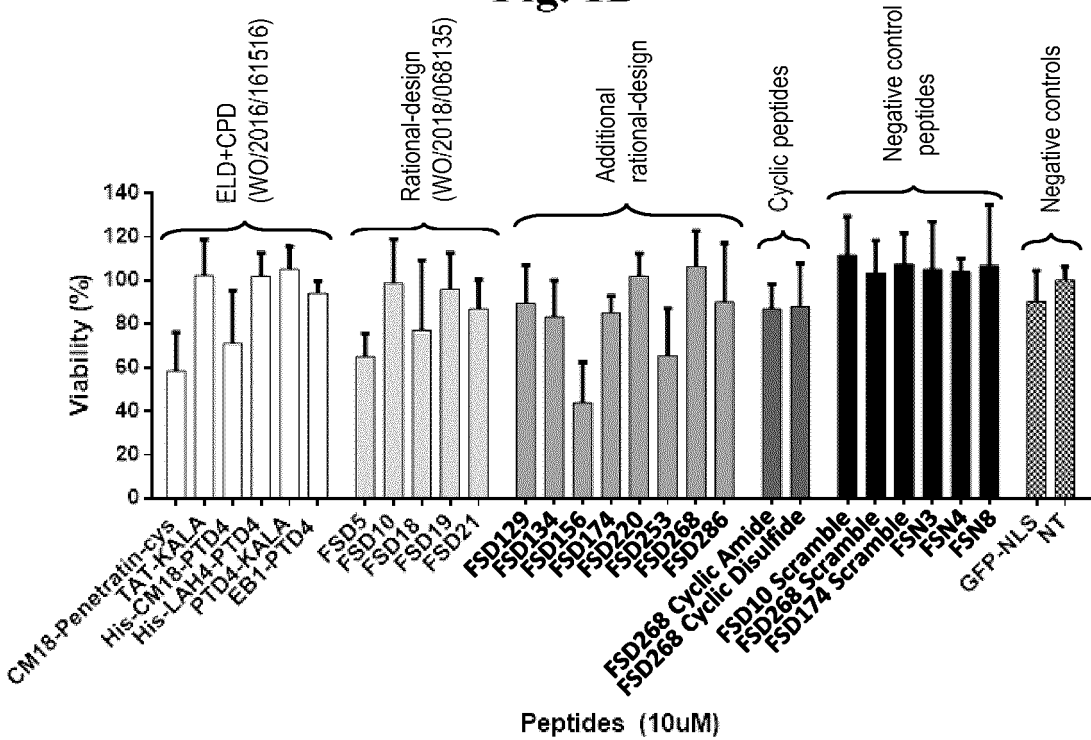


Fig. 1D



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Fig. 2

## Delivery of PI and GFP in HeLa cells

| SEQ ID NO:                                                                                |                         |    | Propidium iodide delivery |             |                      |             | GFP-NLS delivery  |             |                       |             |
|-------------------------------------------------------------------------------------------|-------------------------|----|---------------------------|-------------|----------------------|-------------|-------------------|-------------|-----------------------|-------------|
| Category                                                                                  | Peptide (10 $\mu$ M)    | -- | Mean % PI+ cells          | Stand. dev. | Mean % Viability PI+ | Stand. dev. | Mean % GFP+ cells | Stand. dev. | Mean % Viability GFP+ | Stand. dev. |
| <b>ELD+ CPD (described in WO/2016/161516)</b>                                             | 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%         |
| <b>Rationally-designed synthetic peptide shuttle agents (described in WO/2018/068135)</b> | 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%         |
| <b>Additional rationally-designed synthetic peptide shuttle agents described herein</b>   | 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%         |
| <b>Cyclic peptides</b>                                                                    | FSD268 Cyclic Amide     | 49 | 29%                       | 12%         | 97%                  | 4%          | 50%               | 7%          | 87%                   | 11%         |
|                                                                                           | FSD268 Cyclic Disulfide | 50 | 21%                       | 6%          | 91%                  | 13%         | 48%               | 5%          | 88%                   | 20%         |
| <b>Negative Control</b>                                                                   | 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%         |
| <b>Peptide then PI</b>                                                                    | His-CM18-PTD4           | 3  | 2%                        | 4%          | 58%                  | 4%          |                   |             |                       |             |
|                                                                                           | FSD10                   | 23 | 1%                        | 8%          | 87%                  | 8%          |                   |             |                       |             |
|                                                                                           | FSD268                  | 43 | 2%                        | 11%         | 80%                  | 11%         |                   |             |                       |             |
| <b>Ctrl -</b>                                                                             | GFP-NLS                 |    |                           |             |                      |             | 2%                | 1%          | 90%                   | 14%         |
|                                                                                           | NT                      |    |                           |             |                      |             | 1%                | 1%          | 100%                  | 6%          |
| <b>Ctrl -</b>                                                                             | PI                      |    | 1%                        | 0%          | 104%                 | 6%          |                   |             |                       |             |
|                                                                                           | NT                      |    | 1%                        | 0%          | 100%                 | 8%          |                   |             |                       |             |

Fig. 3

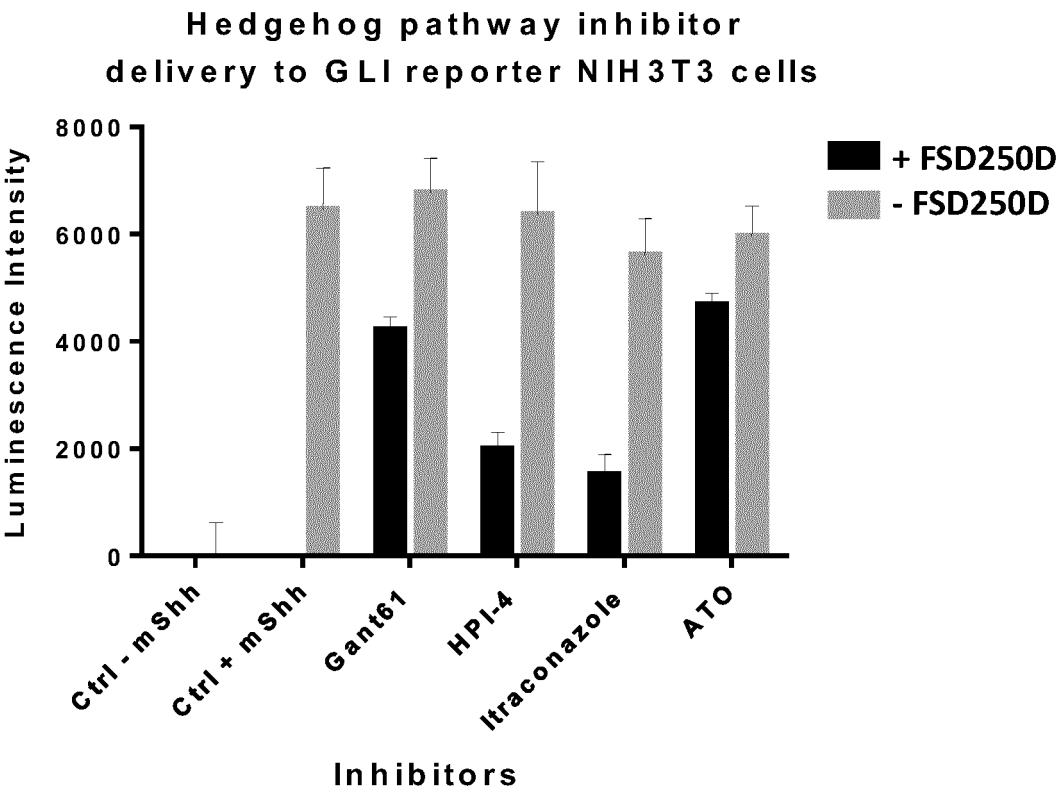
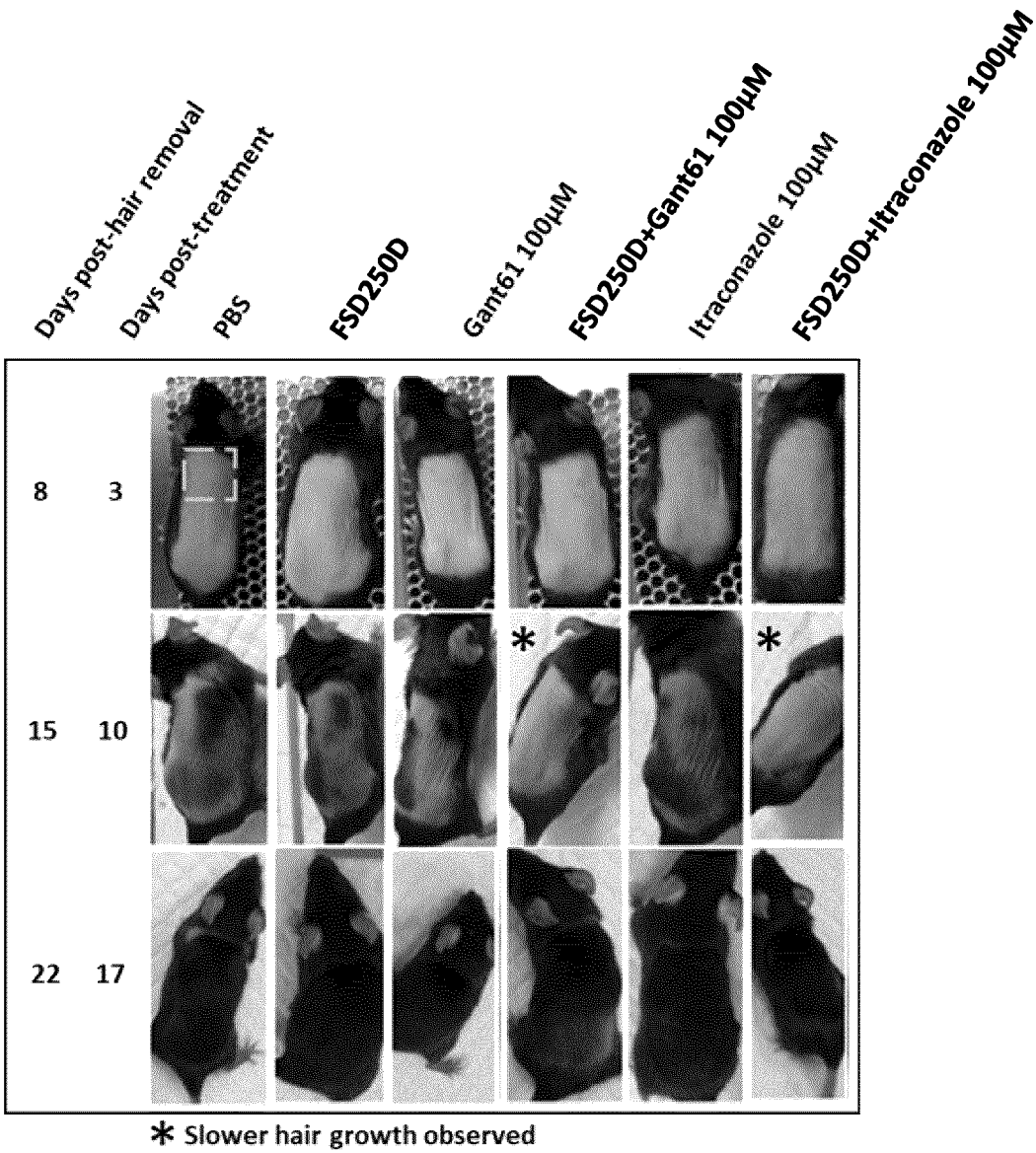
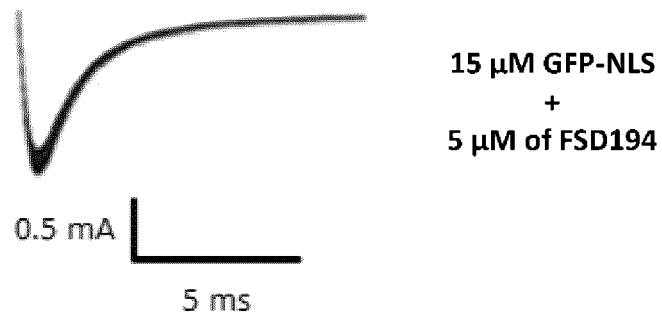
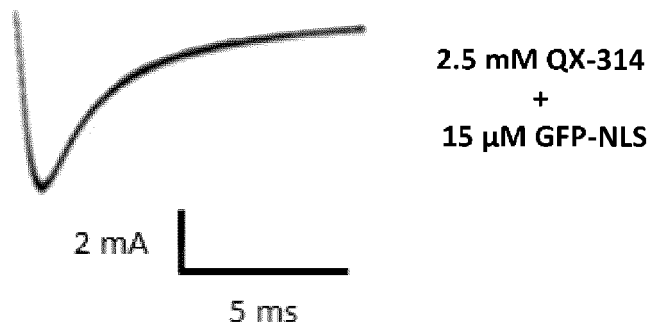
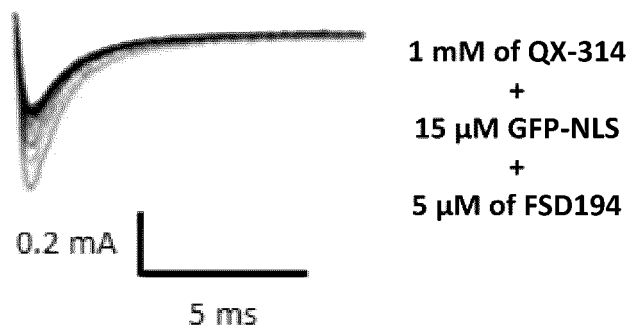


Fig. 4



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**Fig. 5A****Fig. 5B****Fig. 5C**

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**Fig. 6**

| SEQ ID NO | Candidate shuttle agent (10 $\mu$ M) | Propidium iodide (10 $\mu$ g/mL) |                                        |                     | GFP-NLS (10 $\mu$ M) |                                        |                      | Remarks                                |
|-----------|--------------------------------------|----------------------------------|----------------------------------------|---------------------|----------------------|----------------------------------------|----------------------|----------------------------------------|
|           |                                      | Mean Viability                   | Norm. Mean Delivery Score <sup>1</sup> | Mean % of PI+ cells | Mean Viability       | Norm. Mean Delivery Score <sup>1</sup> | 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 $\mu$ M) | Propidium iodide (10 $\mu$ g/mL) |                                        |                     | GFP-NLS (10 $\mu$ M) |                                        |                      | Remarks                                |
|-----------|--------------------------------------|----------------------------------|----------------------------------------|---------------------|----------------------|----------------------------------------|----------------------|----------------------------------------|
|           |                                      | Mean Viability                   | Norm. Mean Delivery Score <sup>1</sup> | Mean % of PI+ cells | Mean Viability       | Norm. Mean Delivery Score <sup>1</sup> | 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%                  |                                        |

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**Fig. 6 (cont'd)**

| SEQ ID NO | Candidate shuttle agent (10 $\mu$ M) | Propidium iodide (10 $\mu$ g/mL) |                                        |                     | GFP-NLS (10 $\mu$ M) |                                        |                      | Remarks                                |
|-----------|--------------------------------------|----------------------------------|----------------------------------------|---------------------|----------------------|----------------------------------------|----------------------|----------------------------------------|
|           |                                      | Mean Viability                   | Norm. Mean Delivery Score <sup>1</sup> | Mean % of PI+ cells | Mean Viability       | Norm. Mean Delivery Score <sup>1</sup> | 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 $\mu$ M) | Propidium iodide (10 $\mu$ g/mL) |                                        |                     | GFP-NLS (10 $\mu$ M) |                                        |                      | Remarks |
|-----------|--------------------------------------|----------------------------------|----------------------------------------|---------------------|----------------------|----------------------------------------|----------------------|---------|
|           |                                      | Mean Viability                   | Norm. Mean Delivery Score <sup>1</sup> | Mean % of PI+ cells | Mean Viability       | Norm. Mean Delivery Score <sup>1</sup> | 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 $\mu$ M) | Propidium iodide (10 $\mu$ g/mL) |                                        |                     | GFP-NLS (10 $\mu$ M) |                                        |                      | Remarks |
|-----------|--------------------------------------|----------------------------------|----------------------------------------|---------------------|----------------------|----------------------------------------|----------------------|---------|
|           |                                      | Mean Viability                   | Norm. Mean Delivery Score <sup>1</sup> | Mean % of PI+ cells | Mean Viability       | Norm. Mean Delivery Score <sup>1</sup> | 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 $\mu$ M) | Propidium iodide (10 $\mu$ g/mL) |                                        |                     | GFP-NLS (10 $\mu$ M) |                                        |                      | Remarks |
|-----------|--------------------------------------|----------------------------------|----------------------------------------|---------------------|----------------------|----------------------------------------|----------------------|---------|
|           |                                      | Mean Viability                   | Norm. Mean Delivery Score <sup>1</sup> | Mean % of PI+ cells | Mean Viability       | Norm. Mean Delivery Score <sup>1</sup> | 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 $\mu$ M) | Propidium iodide (10 $\mu$ g/mL) |                                        |                     | GFP-NLS (10 $\mu$ M) |                                        |                      | Remarks |
|-----------|--------------------------------------|----------------------------------|----------------------------------------|---------------------|----------------------|----------------------------------------|----------------------|---------|
|           |                                      | Mean Viability                   | Norm. Mean Delivery Score <sup>1</sup> | Mean % of PI+ cells | Mean Viability       | Norm. Mean Delivery Score <sup>1</sup> | 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 $\mu$ M) | Propidium iodide (10 $\mu$ g/mL) |                                        |                     | GFP-NLS (10 $\mu$ M) |                                        |                      | Remarks |
|-----------|--------------------------------------|----------------------------------|----------------------------------------|---------------------|----------------------|----------------------------------------|----------------------|---------|
|           |                                      | Mean Viability                   | Norm. Mean Delivery Score <sup>1</sup> | Mean % of PI+ cells | Mean Viability       | Norm. Mean Delivery Score <sup>1</sup> | 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%                  |         |

<sup>1</sup> 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 $\mu$ M) | Propidium iodide (10 $\mu$ g/mL) |                                        |                     | GFP-NLS (10 $\mu$ M) |                                        |                      | Remarks |
|-----------|--------------------------------------|----------------------------------|----------------------------------------|---------------------|----------------------|----------------------------------------|----------------------|---------|
|           |                                      | Mean Viability                   | Norm. Mean Delivery Score <sup>1</sup> | Mean % of PI+ cells | Mean Viability       | Norm. Mean Delivery Score <sup>1</sup> | 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%                  |         |

<sup>1</sup> Normalized Mean Delivery Scores were normalized to that of the “cargo alone” control for each experimental batch.