**Figure 1-figure supplement 1-supplemental file 1**

Sequences of peptide tags fused to mammalian SpCas9 (cf. Figure 1-supplemental file 1)

MFO-Cas9-O (heiCas9)

**myc**-flexible linker-**oNLS**-Cas9-**oNLS**

|  |
| --- |
|  1 atggagcagaagctgatcagcgaggaggacctgggaggaagcggaccacctcccaagagg 60 |
|  1 M **E Q K L I S E E D L** G G S G **P P P K R** 20 |
|  61 cccaggctggac-------Cas9-------cctcctcccaagaggcccaggctggactaa 4215 |
|  21 **P R L D** -------CAS9-------**P P P K R** **P R L D** \* 1404 |

MIS-Cas9-S

**c-myc**-internal linker-**SV40 NLS**-Cas9- **SV40NLS**

|  |
| --- |
|  1 atg**gagcagaagctgatcagcgaggaggacctg**ggtatccacggagtcccagcagcc**gct** 60 |
|  1 M **E Q K L I S E E D L** G I H G V P A A **A**  20 |
|  61 **ccaaagaagaagcgtaaggta**----Cas9----**ccaaagaagaagcgtaaggta**gattaa 4221 |
|  21 **P K K K R K V** ----CAS9----**P K K K R K V** D \* 1406 |

MSF-Cas9-S

**c-myc**-**SV40 NLS**-flexible linker-Cas9-**SV40 NLS**

|  |
| --- |
|  1 atg**gagcagaagctgatcagcgaggaggacctg**atg**gctccaaagaagaagcgtaaggta** 60 |
|  1 M **E Q K L I S E E D L** M **A P K K K R K V**  20 |
|  61 ggaggaagcgga-------Cas9-------**gctccaaagaagaagcgtaaggta**gattaa 4212 |
|  21 G G S G -------CAS9-------**A P K K K R** **K V** D \* 1403 |

MSI-Cas9-Xl (myc-Cas9)

**c-myc**-**Sv40**-internal linker-Cas9-**Xenopus laevis nucleoplasmin NLS**

|  |
| --- |
|  1 atg**gagcagaagctgatcagcgaggaggacctg**atg**gccccaaagaagaagcggaaggtc** 60 |
|  1 M **E Q K L I S E E D L** M **A P K K K R K V**  |
|  61 ggtatccacggagtcccagcagcc----Cas9----**aaaaggccggcggccacgaaaaag** 4209 |
|  21 G I H G V P A A ----CAS9----**K R P A A T K K** 1403 |
|  4210 **gccggccaggcaaaaaagaaaaag**taa 4236 |
|  1404 **A G Q A K K K K** \* 1411 |

OMF-Cas9-O

|  |
| --- |
| **oNLS-c-myc-flexible linker-Cas9-oNLS** |
|  1 atg**ccacctcccaagaggcccaggctggac**ctcgag**gagcagaagctgatcagcgaggag** 60 |
|  1 M **P P P K R P R L D** L E **E Q K L I S E E** 20 |
|  61 **gacctg**ggaggaagcgga----Cas9---**cctcctcccaagaggcccaggctggac**taa 4215 |
|  21 **D L** G G S G ----CAS9---**P P P K R** **P R L D** \* 1404 |

SMF-Cas9-S

**SV40 NLS**-**c-myc**-flexible linker-Cas9-**SV40 NLS**

|  |
| --- |
|  1 atg**gctccaaagaagaagcgtaaggta**ctcgag**gagcagaagctgatcagcgaggaggac** 60 |
|  1 M **A P K K K R K V** L E **E Q K L I S E E D**  20 |
|  61 **ctg**ggaggaagcgga-----Cas9------**gctccaaagaagaagcgtaaggta**gattaa 4215 |
|  21 **L** G G S G -----CAS9------**A P K K K** **R K V** D \* 1404 |