Table S2. Synthetic DNA sequences of SsNE2 tagged with various targeting signals\*.

**Construct Name DNA Sequence**

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| --- | --- |
| **SP-SsNE2-NLS** | GGGG**ACAAGTTTGTACAAAAAAGCAGGCTTC**ATGCAATTCTCATCTGCTCTTATCTCTGCCATCACCGTTGCTCTTGCTTCGGCTGCCACCATTGGACAACGTGACGAGGCCGTCTTCAAGGTCTCTGACTTCAGCGCAGGCTGTATCCAACACAGCACCCAGTGCCTCTACCACTTCACTCTCATCCAACCCGGTACCATGGAGACCGTCGGTGTTGAATGTTCCGCCCTCGTTAGCGCCTACACCAATGGCTCCCTCCCCAACATCGGCAAATGGCAAGGCAAATGCAAGGATTCTTCCCGCACTTTCTGGGTTGTCCGTCAAAACGAGGGTCTTAAGCTCTGGGCTTCTCAACCAGTTACTCCAGCTAGCAACCAAACCGCATCCCACCTCCTCCCAGGCACTGACTTTGAAATGATCAAATACTCTATCGGTAGCGTTGACAGCTACACTGGACCAACTGCTTTCGACTTGACCTACGACTGGCCTAAGAAGAAGAGAAAGGTT**GACCCAGCTTTCTTGTACAAAGTGGT**CCCC |
| **SP-SsNE2-NES** | GGGG**ACAAGTTTGTACAAAAAAGCAGGCTTC**ATGCAATTCTCATCTGCTCTTATCTCTGCCATCACCGTTGCTCTTGCTTCGGCTGCCACCATTGGACAACGTGACGAGGCCGTCTTCAAGGTCTCTGACTTCAGCGCAGGCTGTATCCAACACAGCACCCAGTGCCTCTACCACTTCACTCTCATCCAACCCGGTACCATGGAGACCGTCGGTGTTGAATGTTCCGCCCTCGTTAGCGCCTACACCAATGGCTCCCTCCCCAACATCGGCAAATGGCAAGGCAAATGCAAGGATTCTTCCCGCACTTTCTGGGTTGTCCGTCAAAACGAGGGTCTTAAGCTCTGGGCTTCTCAACCAGTTACTCCAGCTAGCAACCAAACCGCATCCCACCTCCTCCCAGGCACTGACTTTGAAATGATCAAATACTCTATCGGTAGCGTTGACAGCTACACTGGACCAACTGCTTTCGACTTGACCTACGACTGGAACGAGCTTGCTCTTAAGTTGGCTGGACTTGATATT**GACCCAGCTTTCTTGTACAAAGTGGT**CCCC |
| **SP-CBL-SsNE2∆SP-NES** | GGGG**ACAAGTTTGTACAAAAAAGCAGGCTTC**ATGGGCTGCTTCCACTCAAAGGCAGCAAAAGAATTTGCCACCATTGGACAACGTGACGAGGCCGTCTTCAAGGTCTCTGACTTCAGCGCAGGCTGTATCCAACACAGCACCCAGTGCCTCTACCACTTCACTCTCATCCAACCCGGTACCATGGAGACCGTCGGTGTTGAATGTTCCGCCCTCGTTAGCGCCTACACCAATGGCTCCCTCCCCAACATCGGCAAATGGCAAGGCAAATGCAAGGATTCTTCCCGCACTTTCTGGGTTGTCCGTCAAAACGAGGGTCTTAAGCTCTGGGCTTCTCAACCAGTTACTCCAGCTAGCAACCAAACCGCATCCCACCTCCTCCCAGGCACTGACTTTGAAATGATCAAATACTCTATCGGTAGCGTTGACAGCTACACTGGACCAACTGCTTTCGACTTGACCTACGACTGGAACGAGCTTGCTCTTAAGTTGGCTGGACTTGATATT**GACCCAGCTTTCTTGTACAAAGTGGT**CCCC |
| **SP-CBL-SsNE2-NES** | GGGG**ACAAGTTTGTACAAAAAAGCAGGCTTC**ATGCAATTCTCATCTGCTCTTATCTCTGCCATCACCGTTGCTCTTGCTTCGGCTGGCTGCTTCCACTCAAAGGCAGCAAAAGAATTTGCCACCATTGGACAACGTGACGAGGCCGTCTTCAAGGTCTCTGACTTCAGCGCAGGCTGTATCCAACACAGCACCCAGTGCCTCTACCACTTCACTCTCATCCAACCCGGTACCATGGAGACCGTCGGTGTTGAATGTTCCGCCCTCGTTAGCGCCTACACCAATGGCTCCCTCCCCAACATCGGCAAATGGCAAGGCAAATGCAAGGATTCTTCCCGCACTTTCTGGGTTGTCCGTCAAAACGAGGGTCTTAAGCTCTGGGCTTCTCAACCAGTTACTCCAGCTAGCAACCAAACCGCATCCCACCTCCTCCCAGGCACTGACTTTGAAATGATCAAATACTCTATCGGTAGCGTTGACAGCTACACTGGACCAACTGCTTTCGACTTGACCTACGACTGGAACGAGCTTGCTCTTAAGTTGGCTGGACTTGATATT**GACCCAGCTTTCTTGTACAAAGTGGT**CCCC |
| **SP-SsNE2-GFP-KDEL** | GGGG**ACAAGTTTGTACAAAAAAGCAGGCTTC**ATGCAATTCTCATCTGCTCTTATCTCTGCCATCACCGTTGCTCTTGCTTCGGCTGCCACCATTGGACAACGTGACGAGGCCGTCTTCAAGGTCTCTGACTTCAGCGCAGGCTGTATCCAACACAGCACCCAGTGCCTCTACCACTTCACTCTCATCCAACCCGGTACCATGGAGACCGTCGGTGTTGAATGTTCCGCCCTCGTTAGCGCCTACACCAATGGCTCCCTCCCCAACATCGGCAAATGGCAAGGCAAATGCAAGGATTCTTCCCGCACTTTCTGGGTTGTCCGTCAAAACGAGGGTCTTAAGCTCTGGGCTTCTCAACCAGTTACTCCAGCTAGCAACCAAACCGCATCCCACCTCCTCCCAGGCACTGACTTTGAAATGATCAAATACTCTATCGGTAGCGTTGACAGCTACACTGGACCAACTGCTTTCGACTTGACCTACGACTGGAGTAAAGGAGAAGAACTTTTCACTGGAGTTGTCCCAATTCTTGTTGAATTAGATGGTGATGTTAATGGGCACAAATTTTCTGTCAGTGGAGAGGGTGAAGGTGATGCAACATACGGAAAACTTACCCTTAAATTTATTTGCACTACTGGAAAACTACCTGTTCCGTGGCCAACACTTGTCACTACTTTCTCTTATGGTGTTCAATGCTTTTCAAGATACCCAGATCATATGAAGCGGCACGACTTCTTCAAGAGCGCCATGCCTGAGGGATACGTGCAGGAGAGGACCATCTTCTTCAAGGACGACGGGAACTACAAGACACGTGCTGAAGTCAAGTTTGAGGGAGACACCCTCGTCAACAGGATCGAGCTTAAGGGAATCGATTTCAAGGAGGACGGAAACATCCTCGGCCACAAGTTGGAATACAACTACAACTCCCACAACGTATACATCATGGCCGACAAGCAAAAGAACGGCATCAAAGCCAACTTCAAGACCCGCCACAACATCGAAGACGGCGGCGTGCAACTCGCTGATCATTATCAACAAAATACTCCAATTGGCGATGGCCCTGTCCTTTTACCAGACAACCATTACCTGTCCACACAATCTGCCCTTTCGAAAGATCCCAACGAAAAGAGAGACCACATGGTCCTTCTTGAGTTTGTAACAGCTGCTGGGATTACACATGGCATGGATGAACTATACAAAAAAGATGAGTTGTGA**GACCCAGCTTTCTTGTACAAAGTGGT**CCCC |
| **SPPR1-SsNE2** | GGGG**ACAAGTTTGTACAAAAAAGCAGGCTTC**ATGGGATTTGTTCTCTTTTCACAATTGCCTTCATTTCTTCTTGTCTCTACACTTCTCTTATTCCTAGTAATATCCCACTCTTGCCGTGCCGCCACCATTGGACAACGTGACGAGGCCGTCTTCAAGGTCTCTGACTTCAGCGCAGGCTGTATCCAACACAGCACCCAGTGCCTCTACCACTTCACTCTCATCCAACCCGGTACCATGGAGACCGTCGGTGTTGAATGTTCCGCCCTCGTTAGCGCCTACACCAATGGCTCCCTCCCCAACATCGGCAAATGGCAAGGCAAATGCAAGGATTCTTCCCGCACTTTCTGGGTTGTCCGTCAAAACGAGGGTCTTAAGCTCTGGGCTTCTCAACCAGTTACTCCAGCTAGCAACCAAACCGCATCCCACCTCCTCCCAGGCACTGACTTTGAAATGATCAAATACTCTATCGGTAGCGTTGACAGCTACACTGGACCAACTGCTTTCGACTTGACCTACGACTGG**GACCCAGCTTTCTTGTACAAAGTGGT**CCCC |

\* AttB site sequences are denoted in bold font. Various targeting signals in each construct are marked in gray.