**Table S5**. Used primers for generating constructs and confirming sequences.

|  |  |  |  |
| --- | --- | --- | --- |
| Purpose | Primer name | Sequence (5' to 3') | Start site1 |
| Amplification of *VMAT1* cDNA | Forward | AAAGATCTCTCCGGACCATTCTGGATG |   |
| Reverse | TTGAATTCCTACTCCTCATGGTCAGGC |   |
|  |  |  |   |
| Site-directed mutagenesis | I136T\_F | GTTTCTTGGAGGAAGAGACTACCCGGGTCGGGGTTC |   |
| I136T\_R | GAACCCCGACCCGGGTAGTCTCTTCCTCCAAGAAAC |   |
| I136N\_F | GTTTCTTGGAGGAAGAGAATACCCGGGTCGGGGTTC |   |
| I136N\_R | GAACCCCGACCCGGGTATTCTCTTCCTCCAAGAAAC |   |
| G130E\_F | CTGCTTGCAAGGCACAGAATTCTTGGAGGAAGAGAA |   |
| G130E\_R | TTCTCTTCCTCCAAGAATTCTGTGCCTTGCAAGCAG |   |
| N136T\_F2 | GAATTCTTGGAGGAAGAGACTACCCGGGTCGGG |   |
| N136T\_R2 | CCCGACCCGGGTAGTCTCTTCCTCCAAGAATTC |   |
|  |  |  |   |
| Sequence confirmation | F1 | GGCACCAAAATCAACGGGAC | –148 |
| F2 | AGGACGACGGCAACTACAAG | 304 |
| F3 | TCCGGACTCAGATCTCTCCG | 717 |
| F4 | CCGTGGCTGTTGAAGAAAGC | 994 |
| F5 | GGAGCTCCCTTTGGAAGTGT | 1455 |
| F6 | CCTCATTGGCACCAACCTCT | 1775 |

1The first nucleotide site of YFP was regarded as 0 and the last nucleotide of VMAT1 was the 2306th site.

2These primers were used for the VMAT1 plasmid encoding 130Glu/136Asn.