**Supplementary file 1.** List of guide RNA and deep sequencing primer sequences used for CRISPR/Cas9-mediated genome editing of *Dnttip1* and *Elmsan1* in mESCs.

|  |  |
| --- | --- |
| **gRNAs** | **Sequence (5’ to 3’)** |
| *Dnttip1* gRNA | ACAUCGGCAGGUGCAGCGAA |
| *Elmsan1* gRNA | GCUCUCUUGGCGGCUAAGGC |
|  |  |
| **Deep Sequencing Primers** | **Sequence (5’ to 3’)** |
| Dnttip1.NGS.F partial Illumina adaptors (upper case) | CACTCTTTCCCTACACGACGCTCTTCCGATCTccaaggtgggagaagtgagaagcagg |
| Dnttip1.NGS.R partial Illumina adaptors (upper case) | GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCTccccactcctgtgctctttacgggc |
| Elmsan1.NGS.F partial Illumina adaptors (upper case) | CACTCTTTCCCTACACGACGCTCTTCCGATCTaaacaggggctcaactcctgaacct |
| Elmsan1.NGS.R partial Illumina adaptors (upper case) | GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCTcttgtgctcggtggggtactgctca |