

**Table S1.** The gRNAs and related primer sequences

Primers	Sequence (5'→3')
T7- <i>ctdsp2</i> (Exon-1)-sfd	<u>TAATACGACTCACTATA</u> GGTTGTCTTCGAAAACAG GT GTTTTAGAGCTAGAAATAGC
T7- <i>ctdsp2</i> (Exon-2)-sfd	<u>TAATACGACTCACTATA</u> gTGCTAGAGCCTGAGGAC AA GTTTTAGAGCTAGAAATAGC
T7- <i>ctdsp2</i> (Exon-3)-sfd	<u>TAATACGACTCACTATA</u> GCTGGCAGCAGACTCTC GCC GTTTTAGAGCTAGAAATAGC
T7- <i>ctdsp2</i> (Exon-7)-sfd	<u>TAATACGACTCACTATA</u> GTCGTGGTTTGACGATTC GG GTTTTAGAGCTAGAAATAGC
T7- <i>tp53</i> (Exon-2)-sfd	<u>TAATACGACTCACTATA</u> GGCTCGAACCACGGAGC CCTGGTTTTAGAGCTAGAAATAGC
tracr rev	AAAAAAAGCACCGACTCGGTGCCAC
<i>ctdsp2</i> (Exon-1)-Forward	TTGGTGGTGTCTTTTCCCGA
<i>ctdsp2</i> (Exon-1)-Reverse	CAATGCTTGACTGCAACGGAA
<i>ctdsp2</i> (Exon-2)-Forward	GTGCCATCTCTGGAAAGGGG
<i>ctdsp2</i> (Exon-2)-Reverse	GTCAACCAATCCTTGCCACTG
<i>ctdsp2</i> (Exon-3)-Forward	GATCACTTGCTTACGTCATTCCC
<i>ctdsp2</i> (Exon-3)-Reverse	GCACTGCTGAAGTGTCGTTC
<i>ctdsp2</i> (Exon-7)-Forward	ATTTCAGACCTTGCACTCCCA
<i>ctdsp2</i> (Exon-7)-Reverse	GTTGTGCGGAGCTGAGTAAC
<i>tp53</i> (Exon-2)- Forward	GGCCATTGTCATTTTTCGTATT
<i>tp53</i> (Exon-2)- Reverse	AATTACACACACTTGCCTCCCT

**Note:** The black underline indicates the T7 promoter sequence; The blue sequence indicates the main sequence of the target (excluding PAM); The red sequence indicates the fixed sequence of gRNA scaffold; The “g” refers to the adjustment for the first base of the main sequence is not “g”.