



Supplemental Figure S1. After selecting the CRISPR/Cas9 system-transfected cells, we confirmed the *Tjp1* and *Tjp2* knockout clones using RT-PCR.

TGTGTTGGGGAAATGTGCTGAGCTCATGAGC
TCCTACCAAGTAAGTTGTGCATTAGTTTGTGAT
AAATAAATGTATCACTTAGTATGTTGGGACAAT
TACACATATTGATAATGATGCACTGTCAAATTT
TGATTAAGGAATGAGGTCAGGCTTGTGAGTTT
GTTGTGGTTTTGGTTACAAAGTGTTCAATAAGAT
ATGTGGTATCTTTAGAGTATAGTTCTAATCCTT
CATTATTTTACACAAGTATTAATTATCACCTGG
AAAATTGTTATAAATTCTGGAAGGATTTAGTAA
ATTTACTGTTTAGCCAGATCTGTTTTATTAAGA
GAGTGGAACACAGCCATTTTGGAACTGTATTG
GTGTGATTACTCTATTATCTCCTTTGTATTTACA
TAAGTCAAGGGAAATGTATGTTTCTCCTATGA
GTGGAGAGTATATGACTATCGTTCAGTTTATTA
TTTCTTTTTGTTTGTAG**ACTATCCGAAGGAAGA**
AGAAAGTTCAGATCCCTGTAAGTCACCCAGAT
CCTGAGCCGGTGTCTGATAATGAAGACGATAG
TTATGACGAAGAAGTGCATGACCCAAGAGCTG
GCCGCGGTGCTTTAGCGAACAGAAGGAGCGA
GAAGAGCTGGGCAAGGGATAGGAGTGCAAGC
AGGGAGAGGAGCCTGTCC**CCTCGCTCGGACA**
GGCGGTCCGTGGCCTCCAGTCAGCCCGCAA
GCCACCAAGGTCACACTGGTGAAGTCTCGG
AAAAATGAAGGTATCACTGACTCTCACTGTTCT
CACGTGAGACTTTTAAAGCTAGTTTAATAAGA
AATACAATGACCATCTTATCTGGTTTTTTTCCAT
TTCTCTTTCTAGTCATGTTATCTTGCTAAGAGTC
AAATCCTGGTAAGGTAGACATTGGGATATTTT
GGAACCTTTTCTCAAATCATTTTGTGGTGCAA
ACTTGATGTTGAATTTTGGTTTTATTGGAACAG
GAATAGCCAAATTCAAATTGTGCT**AGCAAGA**
AATGTTGGGCCAG

Intron

Exon5

Intron

GTTGTCAGGGATACAGATGTTTAAGGTTTGTGT
AGGTTTGTGTTTGGTTTGTGTTTGTATGACCCTCCC
ACCCTCCTCACACACACTGAGACTAGAGACTGA
CAGTTTTAATTAAACTGGATCCAGGCCCACTG
CCCTCCCAGGTGTGTCTCTGCCGCCCTGCATCAT
CTACTCTATTTGTCTGAATAG**GTGGTCAAGAGAC**
CCCGGAAGGTTCAAGGTGGCCCCACTGCAAGGC
AGCCCCCTCTCAGTCATGACGACCGAGGTTT
TGAAGTGATTGAAGAATTTGATGGCAGAAGTTT
CCGCAGCGGCTACAGTGAGAGGAGTCGGCACA
GCAGCCACGACATGCTCAGCCACAGCTGGGAG
GGCAATAGGGAGAGGGGGCGACCCCATCAGC
GCACACAGAGCCGGGAGCGGGAGCGCAGCCG
TGGCAGGAGCCTGGAACGGGGCCTGGACCAG
GAAGACTATGGGCGCAGCCGTGAGCGCAGCCG
TGGCCGGAGCCTGGAGCGCGGGCTGGACCGC
GACTTTGTGTCCAGGGACCACAGCCGTGGCCG
TAGCATCGACAGGGACTACGACCGAGACTATGA
GCGCTCCTATCA**GAAGCTTATGAACCCGACT**
ACGGAGGCGGCTACAGCCCATCATATGACCGTA
GAGCCCATCCAGAGACCCGCTATGAACGGAGC
CGCAGCCGAGAACACCTACGTTCCCGAAGCCC
CAGCCCCGAGTCTAGGTCACGG**CATGAACACA**
AGGGCCAACATGATCCCGACAGGCCCATCGG
GGTCCTTCTAACCAAAAGCAAAGCAAATGAAG
GTAGGCACACATGGTGTGGGGATACAAGCTGTA
CCTGCAGCAGCATCACCTGGTGTCTGCCTGGCA
CCTGCCAGTGTTACGCGTCAACCCGAAGTGGCC
AGCACCTATGGACTCATTTAGTTATCACTGCCAT
AAGAGAGTCAGAGATGCAGAAGGGTCCATTGA
TCTGGACGTAGTTGTCCAGTGGCAAAGCCAGG
TCTTAAGAGATGTTCTTAAGT

Intron

Exon5

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Sequence : Primer
Red : gRNA

Supplemental Figure S2. Amplifying the gRNA-selected region using specific primers.