

Mouse CD38 gene knockdown was performed using CRISPR interference (CRISPRi). Different sites upstream (MusCD38-up1 and MusCD38-up2) or in the exons (MusCD38-E1a, MusCD38-E1b, MusCD38-E1c and MusCD38-E3) of CD38 gene were selected and ligated to human sgRNA plasmid to block transcription initiation or elongation. All sgRNA sequences target to mouse CD38 gene were summarized in Tab. S1.

Tab. S1. sgRNA sequences target to mouse CD38 gene

Name	Sequences
MusCD38-up1	GGAGAACCACCTTGTGG <u>GGCTCCCGAAGACTGGCCC</u> GTTTTAGAGCT AGAAATAGCAAGTTAAAATAAGGC
MusCD38-up2	GGAGAACCACCTTGTGG <u>GAACTTTGGAGCAGGAGTAG</u> GTTTTAGAGCT AGAAATAGCAAGTTAAAATAAGGC
MusCD38-E1a	GGAGAACCACCTTGTGG <u>GCCGCGCTCACTCCTGGT</u> GTTTTAGAGCTAG AAATAGCAAGTTAAAATAAGGC
MusCD38-E1b	GGAGAACCACCTTGTGGG <u>GACCCACTCCGAGACCGATC</u> GTTTTAGAGC TAGAAATAGCAAGTTAAAATAAGGC
MusCD38-E1c	GGAGAACCACCTTGTGG <u>GACCACGATCCCTACTACCA</u> GTTTTAGAGCT AGAAATAGCAAGTTAAAATAAGGC
MusCD38-E3	GGAGAACCACCTTGTGG <u>GCTGATGATCTCAGGTGGTG</u> GTTTTAGAGCT AGAAATAGCAAGTTAAAATAAGGC
sgRNA R	CCTAGTACTCGAGAAAAAAGCACCGACTCGGTGCCACTTTTTCAAGTT GATAACGGACTAGCCTTATTTAACTTGCTATTTCTAGCTCTAAAAC

The sgRNA-targeting sequences are underlined and are indicated in red.