

S1 Table. Sequences of paired sgRNAs designed for targeting ITGB1, ITGAv and ITGB4 genes.

sgRNA targeting ITGB1 gene (exon 1)	Guide A	top oligo (ZQ72)	5'- CACC G ATCAGTCCAATCCAGAAAAT-3'
		bottom oligo (ZQ73)	5'- AAACATTTTCTGGATTGGACTGATC-3'
	Guide B	top oligo (ZQ74)	5'- CACC G TGCTGTGTGTTTGCTCAAAC-3'
		bottom oligo (ZQ75)	5'- AAACGTTTGAGCAAACACACAGCAC-3'
sgRNA targeting ITGB1 gene (exon 3)	Guide A	top oligo (ZQ58)	5'- CACC G CTTTATATCTTTGGAGCCTC-3'
		bottom oligo (ZQ59)	5'- AAACGAGGCTCCAAAGATATAAAGC-3'
	Guide B	top oligo (ZQ82)	5'- CACC G GTGCTCAGTCTTACTAATAA-3'
		bottom oligo (ZQ83)	5'- AAACCTTATTAGTAAGACTGAGCAC-3'
sgRNA targeting ITGB1 gene (exon 5)	Guide A	top oligo (ZQ80)	5'- CACC G AGTTCTGTTCACCTGTGCAA- 3'
		bottom oligo (ZQ81)	5'- AAACCTTGACACAAGTGAACAGAACTC- 3'
	Guide B	top oligo (ZQ82)	5'- CACC G GTGCTCAGTCTTACTAATAA- 3'
		bottom oligo (ZQ83)	5'- AAACCTTATTAGTAAGACTGAGCAC- 3'
sgRNAs targeting ITGAv gene (exon 4)	Guide A	top oligo (ZQ95)	5'- CACC G CAGTTCTCCAATGGTACAAT- 3'
		bottom oligo (ZQ96)	5'- AAACATTGTACCATTGGAGAACTGC- 3'
	Guide B	top oligo (ZQ97)	5'- CACC G AAACAGGAGCGAGAGCCTGT- 3'
		bottom oligo (ZQ98)	5'- AAACACAGGCTCTCGCTCCTGTTTC- 3'
sgRNAs targeting ITGB4 gene (exon 6)	Guide A	top oligo (CU1)	5'- -CACC G AAATCCAATAGTGTAGTCGC- 3'
		bottom oligo (CU2)	5'- -AAACGCGACTACACTATTGGATTTC- 3'
	Guide B	top oligo (CU3)	5'- CACC G GCGTCCCGCAGACGGACATG- 3'
		bottom oligo (CU4)	5'- AAACCATGTCCGTCTGCGGGACGCC- 3'
ZQ66		U6 forward primer for sequencing of sgRNA constructs	5'- GAGGGCCTATTTCCCATGATTCC- 3'

The complementary oligo pairs (blue sequences) were annealed before cloning into the vector. The corresponding cloning schemes for PX462-xxxx (sgRNA guide A expressing CRISPR construct) and PX462-xxxx (sgRNA guide B expressing CRISPR construct) are illustrated in **Fig. 1D and S3,4 Fig.** SgRNAs targeting ITGB1 exons 1 and 3 were not successful in generating gene knockout; therefore exon 5 targeting sgRNAs were used.