



Alpha kinase 3 signaling at the M-band maintains sarcomere integrity and proteostasis in striated muscle

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Oligonucleotide Sequences

Guide RNA sequences

ALPK3-tdTomato and ALPK3-SBP3XFLAG

5'-GCCCCCAGCCTCTGCGG-3'

ALPK3^{L639fs/34}

5'-CCAGGCGCCCGGACACTCA-3'

ALPK3^{Q1460X}

5'-GGCCCTGGATGAAGGCAAGC-3'

ALPK3^{R1792X}

5'-GATTGCTACCAAACCTCCGA-3'

Mouse Alpk3^{W1538X}

5'-TCCAGCACTGGCTGTATCAG-3'

Donor repair templates

ALPK3^{L639fs/34}

5'-aggcagtcaggcctcttggggaagagggacccagacTctagtTAGTgggcgctggggagagtccaag
gggaaggcac-3'

ALPK3^{Q1460X}

5'-CGGCGGTCTGGACACAGAGGTGGCCCTGGATGAAGGtAAatAaGAGACACTG
GCCAAGCCCAGGAAAGCCAAAGACCTGCTGA-3'

ALPK3^{R1792X}

5'-TGACTGGAAGATGACTGATGTGCAGATTGCTACCAAgttgtGAGGGTGAGTGG
TTCTTGGGGACAGAATGCCCTCTGGGCGTC-3'

Mouse Alpk3^{W1538X}

5'-CCAGCAGCTCCGAGGCCTTGCAGAAATGCCAAACCTTCCAGCACTGGCTGT
ATCAGTaGACAAACGGCAGCTTTCTTGTACAGATCTGACAGgtatgaggggtgggggactcacagg
tgtg-3'

Screening Primers

ALPK3-tdTomato and ALPK3-SBP3XFLAG

External-F: 5'- CTGGGCCAAGTAGAGAGAC-3'

tdTomato-R: 5'-CTCTTTGATGACCTCCTCGCCCT-3'

External-R: 5'- CTCAAGGATGGTTAGTTGCAGG-3'

ALPK3^{L639fs/34}

External-F: 5'-TGGGCACTCCAGACAAGG-3'

Screening-F: 5'-gggacccagacTctagtTAGT-3'

External-R: 5'-tgtagctggcactccagtcc-3'

ALPK3^{Q1460X}

External-F: 5'-GATTTCTCCCTAAGGTCAGAGC-3'

Screening-F: 5'-TGGCCCTGGATGAAGGtAAatAaG-3'

External-R: 5'-gtgcctcctgcctatatctcagg-3'

ALPK3^{R1792X}

External-F: 5'-gaagagtttggctctaggaatcc-3'

Screening-F: 5'-GTGCAGATTGCTACCAAgttgt-3'

External-R: 5'-ATCAGTAATAGCTGCCACACC-3'

Mouse Alpk3^{W1538X}

Genotype-F: 5'-ACCAGGGCATGTTCTCTGTGG-3'

Genotype-R: 5'-TGTGGGCTTTGAACTGGACTCC-3'