GXXG to GDDG

KH1 GGCGCCATCATT**GGTCGACAGGGC**AGCACCATCAGG

 G R Q G

KH1 DD sense GGCGCCATCATT**GGT**GATGAC**GGC**AGCACCATCAGG

 G D D G

KH1 DD anti CCTGATGGTGCTGCCGTCATCACCAATGATGGCGCC

 KH2 TGATTGGACGAATCATT**GGC**AAGTCGGGCAATACCATTAAACGGATC

 G K S G
KH2 DD sense TGATTGGACGAATCATT**GGC**GATGAC**GGC**AATACCATTAAACGGATC

 G D D G

KH2 DD anti GATCCGTTTAATGGTATTGCCGTCATCGCCAATGATTCGTCCAATCA

KH3 GGCGCCATTATC**GGC**ACCAGG**GGC**TCGCATATCCGAAG

 G T R G

 KH3 DD sense GGCGCCATTATC**GGC**GACGAT**GGC**TCGCATATCCGAAG

 G D D G

KH3 DD anti CTTCGGATATGCGAGCCATCGTCGCCGATAATGGCGCC

KH4 GGGCCGTATCATT**GGC**AAGGGT**GGC**CAAAATGTGCGAGA

 G K G G
KH4 DD sense GGGCCGTATCATT**GGC**GACGAT**GGC**CAAAATGTGCGAGA

 G D D G

KH4 DD anti TCTCGCACATTTTGGCCATCGTCGCCAATGATACGGCCC

PAM sequence mutation on Mid2 gRNA

CATG TCG CGT GCT GAG AA**C** CAA ATT AGC ACC AAG CTG CG -----gRNA ----- PAM

 A E N Q I S T

Donor

PAM mut sense:

CATG TCG CGT GCT GAG AA**T** CAA ATT AGC ACC AAG CTG CG

PAM mut anti:

CGCAGCTTGGTGCTAATTTGATTCTCAGCACGCGACATG