

## Product datasheet for **KN208513**

### FAM20B Human Gene Knockout Kit (CRISPR)

#### Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA:	GFP-puro
Symbol:	FAM20B
Locus ID:	9917
Components:	<p><b>KN208513G1</b>, FAM20B gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: AATGATGACTGGCTTGCGGG</p> <p><b>KN208513G2</b>, FAM20B gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TACATCAGCTGCCAACCGGG</p> <p><b>KN208513D</b>, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p>

#### Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

```

AAGGCGAGTT ACATGATCCC CCATGTTGTG CAAAAAAGCG GTTAGCTCCT TCGGTCCTCC GATCGTTGTC
AGAAGTAAGT TGGCCGAGT GTTATCACTC ATGGTTATGG CAGCACTGCA TAATTCTCTT ACTGTCATGC
CATCCGTAAG ATGCTTTTCT GTGACTGGTG AGTACTCAAC CAAGTCATTC TGAGAATAGT GTATGCCGGC
ACCGAGTTGC TCTTGCCCGG CGTCAATACG GGATAATACC GCGCCACATA GCAGAATTTT AAAAGTGCTC
ATCATTGGAA AACGTTCTTC GGGGCGAAAA CTCTCAAGGA TCTTACCCTG GTTGAGATCC AGTTTCGATGT
AACCCACTCG TGCACCCAAC TGATCTTCAG CATCTTTTAC TTTACCAGC GTTTCTGGGT GAGCAAAAAC
AGGAAGGCAA AATGCCGCAA AAAAGGGAAT AAGGGCGACA CGGAAATGTT GAATACTCAT ACTCTTCCTT
TTTCAATATT ATTGAAGCAT TTATCAGGT TATTGTCTCA TGAGCGGATA CATATTTGAA TGTATTTAGA
AAAATAACA AATAGGGGTT CCGCGCAT TCCCGGAAA AGTGCCACCT GACGTCTAAG AAACCATTAT
TATCATGACA TTAACCTATA AAAATAGGCG TATCACGAGG CCCTTTCGTC TCGCGGTTT CGGTGATGAC
GGTAAAACC TCTGACACAT GCAGCTCCG GAGACGGTCA CAGCTTGCT GTAAGCGGAT GCCGGGAGCA
GACAAGCCCG TCAGGGCGCG TCAGCGGGTG TTGGCGGGTG TCGGGGCTGG CTTAACTATG CGGCATCAGA
GCAGATTGTA CTGAGAGTGC ACCATAAAAT TGTAACGTT AATATTTTGT TAAAATTCGC GTTAAATTTT
TGTTAAATCA GCTCATTTTT TAACCAATAG GCCGAAATCG GCAAAATCCC TTATAATCA AAAGAATAGC
CCGAGATAGG GTTGAGTGTT GTTCCAGTTT GGAACAAGAG TCCACTATTA AAGAACGTGG ACTCCAACGT
CAAAGGGCGA AAAACCGTCT ATCAGGGCGA TGGCCCACTA CGTGAACCAT CACCAAATC AAGTTTTTTG
GGTTCGAGGT GCCGTAAAGC ACTAAATCGG AACCCATAAG GGAGCCCCCG ATTTAGAGCT TGACGGGGAA
AGCCGGCGAA CGTGCGGAGA AAGGAAGGGA AGAAAGCGAA AGGAGCGGGC GCTAGGGCGC TGGCAAGTGT
AGCGGTACG CTGCGGTAA CCACCACACC CGCCGCGCTT AATGCGCCGC TACAGGGCGC GACTATGGT
TGCTTTGACG TATGCGGTGT GAAATACCGC ACAGATCGCT AAGGAGAAAA TACCGCATCA GGCGCCATC
GCCATTCAGG CTGCGCAACT GTTGGGAAGG GCGATCGGTG CGGGCCTCTT CGCTATTACG CCAGCTGGCG
AAAGGGGAT GTGCTGCAAG GCGATTAAGT TGGGTAACGC CAGGGTTTTC CCAGTACGA CGTTGTAATA
CGACGGCCAG TGAATTGGAG GCTACAGTCA GTGGAGAGGA CTTTCACAGG CTGTCGCCGT GCTCATTTGA

```



[View online »](#)

TAACTGCCCG TTATTCATGC GACACATACA GGTCACGACA TCACCTGGGC TTTGCCACAA TTTTGCTCCA  
 CCCAGAGTG GGTGCGGGGA GTGGGGAGAG GCCAGGCAGC AGGAGTGGCA TTTTGGAGCC TGTGGGTGTA  
 GCTGTGGCTG GGTGGCTGCA GCTGTACCCA GGAACACGGG GCCCCTGCTC CACCATCTTG GAAGAGGGCA  
 GGGCTCCAC CTGTTCCAG CTCCTCCAG CTCCGTGGAG TGTGCAGCCC TGGCCATGCC TCTCCCACTG  
 CAGCTGGTGT CTTCGCAGCA GCTGCTCCAG TTGGGCCACT GCTGCCATCA TTAGGTCTT CTCCAGATTA  
 GTTAATTTTA AATTATTGAA CCTTCTGAG CTCAAGAATA GAAAGCCTAA AAGGGTGAGT CATATATTAG  
 AGGCTTACAA AAGATTCAGG GGTGGAAGGA CAGAATTTTT GATCAAATTT TGCTTTGTAC TTGGGCTTGC  
 AGGAACTGTG GAAGGTGCAT CAGTGAAGAA ATGGACCAAT GTGTATAATC ATGGAATCTC CTTGCTAACC  
 ATCACCACCA GCTCTCCTTA ATACATGAGC AAGAGTGGGT CAGGGGAGAA GGAAAAGAGG TCAACACTAG  
 CATGGAGAGC GACGAGAGCG GCCTGCCCGC CATGGAGATC GAGTGCCGCA TCACCGGCAC CCTGAACGGC  
 GTGGAGTTCG AGCTGGTGGG CGGCGGAGAG GGCACCCCGC AGCAGGGCCG CATGACCAAC AAGATGAAGA  
 GCACCAAAGG CGCCCTGACC TTCAGCCCTT ACCTGCTGAG CCACGTGATG GGCTACGGCT TCTACCACTT  
 CGGCACCTAC CCCAGCGGCT ACGAGAACC CTTCCTGCAC GCCATCAACA ACGGCGGCTA CACCAACACC  
 CGCATCGAGA AGTACGAGGA CGGCGGCGTG CTGCACGTGA GCTTCAGCTA CCGCTACGAG GCCGGCCGCG  
 TGATCGGCGA CTTCAAGGTG ATGGGCACCG GCTTCCCGA GGACAGCGTG ATCTTACCAC ACAAGATCAT  
 CCGCAGCAAC GCCACCGTGG AGCACCTGCA CCCCATGGGC GATAACGATC TGGATGGCAG CTTACCCCGC  
 ACCTTCAGCC TGC GCGACGG CGGCTACTAC AGCTCCGTGG TGGACAGCCA CATGCACCTT AAGAGCGCCA  
 TCCACCCAG CATCCTGCAG AACGGGGGCC CCATGTTTCG CTTCGCGCCG GTGGAGGAGG ATCACAGCAA  
 CACCGAGCTG GGCATCGTGG AGTACCAGCA CGCCTTCAAG ACCCCGGATG CAGATGCCGG TGAAGAAAGA  
 GTTAAAGAAT TCCGATCATA TTCAATAACC CTTAATATAA CTTCTGTATA TGTATGCTAT ACGAAGTTAT  
 TAGGTCTGAA GAGGAGTTTA CGTCCAGCCA AGCTTAGGAT CTCGACCTCG AAATTCTACC GGGTAGGGGA  
 GGCCTTTTC CCAAGGCAGT CTGGAGCATG CGCTTTAGCA GCCCGCTGG CACTTGGCGT TACACAAGTG  
 GCCTCTGGCC TCGCACACAT TCCACATCCA CCGGTAGCGC CAACCGGCTC CGTTCTTTGG TGGCCCTTC  
 GCGCCACCTT CTACTCTCC CCTAGTCAGG AAGTTCCTCC CCGCCCGCA GCTCGCGTGC TCGAGGACGT  
 GACAAATGGA AGTAGCACGT CCACTAGTC TCGTGCAGAT GGACAGCACC GCTGAGCAAT GGAAGCGGGT  
 AGGCCTTTGG GGCAGCGGCC AATAGCAGCT TTGCTCCTT GCTTTCTGGG CTCAGCAGCT GGAAGGGTG  
 GGTCCGGGGG CGGGCTCAGG GGCGGGCTCA GGGGCGGGG GGGCGCCGA AGGTCTCCG GAGGCCGGC  
 ATTCTGCACG CTTCAAAGC GCACGTCTGC CGCGCTGTT TCCTCTTCT CATCTCCGG CCTTTCGACC  
 TGCATCCATC TAGATCTCGA GCAGCTGAAG CTTACCATGA CCGAGTACAA GCCACGGTG CGCCTCGCCA  
 CCCGCGACGA CGTCCCAGG GCCGTACGCA CCCTCGCCG CGCGTTGCG GACTACCCG CCACGCGCCA  
 CACCGTCGAT CCGGACCGC ACATCGAGCG GGTCACCGAG CTGCAAGAAC TCTTCTCAC GCGCGTCGGG  
 CTCGACATCG GCAAGGTGTG GGTGCGGAC GACGCGCCG CGGTGGCGGT CTGGACCACG CCGGAGAGCG  
 TCGAAGCGGG GGCGGTGTTC GCCGAGATCG GCCCGCGCAT GGCCGAGTTG AGCGGTTCCG GGCTGGCCG  
 GCAGAACAG ATGGAAGGCC TCCTGGCGCC GCACCGGCC AAGGAGCCCG CGTGGTTCTT GGCCACCGTC  
 GGCCTCTCGC CCGACCACA GGGCAAGGGT CTGGGACGCG CCGTCGTGCT CCCCAGGAGT GAGGCGGCCG  
 AGCGCGCCGG GGTGCCCGC TTCCTGGAGA CCTCCGCGC CCACAACCTC CCCTTCTACG AGCGGCTCGG  
 CTTACCGTCC ACCGCGACG TCGAGGTGCC CGAAGGACCG CGCACCTGGT GCATGACCCG CAAGCCCGGT  
 GCCTGACGCC CGCCCCAGCA CCCGCAGCGC CCGACCGAAA GGAGCGCACG ACCCCATGCA TCGATGATAT  
 CAGATCCCCG GGATGCAGAA ATTGATGATC TATTAACAA TAAAGATGTC CACTAAAATG GAAGTTTTTC  
 CTGTCATACT TTGTTAAGAA GGGTGAGAAC AGAGTACCTA CATTTTGAAT GGAAGGATTG GAGCTACGGG  
 GGTGGGGGTG GGGTGGGATT AGATAAATGC CTGCTCTTTA CTGAAGGCTC TTTACTATTG CTTTATGATA  
 ATGTTTCATA GTTGATATC ATAATTTAAA CAAGCAAAAC CAAATTAAGG GCCAGCTCAT TCCTCCCACT  
 CATGATCTAT AGATCTATAG ATCTCTCGTG GGATCATTGT TTTTCTCTTG ATTCCCACTT TGTGGTTCTA  
 AGTACTGTGG TTTCCAAATG TGTGAGTTTC ATAGCCTGAA GAACGAGATC AGCAGCTCTT GTTCCACATA  
 CACTTCATTC TCAGTATTGT TTTGCCAAGT TCTAATTCCA TCAGAAGCTG GTCGAGATCC GGAACCCTTA  
 ATATAACTTC GTATAATGTA TGCTATACGA AGTTATTAGG TCCCTCGAAG AGGTTCACTA GGC GCGCCTG  
 GCACCAAGC TGGACCATAC CTTGCAGTCT CCCTGGGAGA TTGCAGCCCA GTGGGTGGTT CCCCGGAAG  
 TGTACCCTGA AGAGACACCA GAGCTGGGG CAGTCATGCA TGCCATGGCC ACCAAGAAAA TCATTAAGC  
 TGATGTGGGT TATAAAGGA CACAGCTGAA AGCCTTACTG ATACTTGAAG GAGGCCAGAA AGTTGTTTTT  
 AAACCTAAGC GGTAAGTTTT GATCTTGAA GCTGCATGTG CTAGTTGGTT GATTCATTTA ACTTGGGATT  
 TATATAAGAT TTATTTTGTG ATCTTCTCTT GGAAGTCTCT TCAGTAAAAT AAGAGGGGTA GACTAGATCT  
 CTAAGTCTT TTCTAGCACT TAACATGAAT CTACCTTAT AGTATCATAT AGAATAGTCT TCCTGCCCTA

```

AAAATCCTCT GTGTTCTACC TACTCATTTT TCCCTCTCTG CCCAGAACA CCTGGTAACC CACTGGTCTT
TTTACTATCT CCGTAGTTTT GCCTTTTCCT GAATGTAATA TAGTTGCAAT CACAGAATGT AAGCCCTTTC
AGATTGGCTT CTTTCACTTA GTAAAGTGCA TTTAAGGTTT ACTCTCGCCG GTTGGACTTT AGATCAGAAG
GGATCTTGCT GCCGCCGAA AGAGGAAGGG CTGGAAGAGG AAGGAGCTTG GCGTAATCAT GGTCATAGCT
GTTTCCTGTG TGA AATTGTT ATCCGCTCAC AATTCCACAC AACATACGAG CCGGAAGCAT AAAGTGTA AA
GCCTGGGGTG CCTAATGAGT GAGCTAACTC ACATTAATTG CGTTGCGCTC ACTGCCCGCT TTCCAGTCGG
GAAACCTGTC GTGCCAGCTG CATTAATGAA TCGGCCAACG CGCGGGGAGA GGCGGTTTGC GTATTGGGCG
CTCTTCCGCT TCCTCGCTCA CTGACTCGCT GCGCTCGGTC GTTCGGCTGC GGCGAGCGGT ATCAGTCCAC
TCAAAGGCGG TAATACGGTT ATCCACAGAA TCAGGGGATA ACGCAGGAAA GAACATGTGA GCAAAAAGGCC
AGCAAAAGGC CAGGAACCGT AAAAAGGCCG CGTTGCTGGC GTTTTTCCAT AGGCTCCGCC CCCCTGACGA
GCATCACAAA AATCGACGCT CAAGTCAGAG GTGGCGAAAC CCGACAGGAC TATAAAGATA CCAGGCGTTT
CCCCCTGGAA GCTCCCTCGT GCGCTCTCCT GTTCCGACCC TGCCGCTTAC CGGATACCTG TCCGCCTTTC
TCCCTTCGGG AAGCGTGGCG CTTTCTCATA GCTCACGCTG TAGGTATCTC AGTTCGGTGT AGGTCGTTTCG
CTCCAAGCTG GGCTGTGTGC ACGAACCCCC CGTTCAGCCC GACCGCTGCG CTTATCCGG TAACTATCGT
CTTGAGTCCA ACCCGGTAAG ACACGACTTA TCGCCACTGG CAGCAGCCAC TGGAACAGG ATTAGCAGAG
CGAGGTATGT AGGCGGTGCT ACAGAGTTCT TGAAGTGGTG GCCTAACTAC GGCTACACTA GAAGGACAGT
ATTTGGTATC TGCCTCTGCT TGAAGCCAGT TACCTTCGGA AAAAGAGTTG GTAGCTCTTG ATCCGGCAAAA
CAAACCACCG CTGGTAGCGG TGGTTTTTTT GTTTGCAAGC AGCAGATTAC GCGCAGAAAA AAAGGATCTC
AAGAAGATCC TTTGATCTTT TCTACGGGGT CTGACGCTCA GTGGAACGAA AACTCACGTT AAGGGATTTT
GGTCATGAGA TTATCAAAA GGATCTTCAC CTAGATCCTT TAAATTTAAA AATGAAGTTT TAAATCAATC
TAAAGTATAT ATGAGTAAAC TTGGTCTGAC AGTTACCAAT GCTTAATCAG TGAGGCACCT ATCTCAGCGA
TCTGTCTATT TCGTTCATCC ATAGTTGCCT GACTCCCGT CGTGATAGATA ACTACGATAC GGGAGGGCTT
ACCATCTGGC CCCAGTGTG CAATGATACC GCGAGACCCA CGCTCACCGG CTCAGATTT ATCAGCAATA
AACACGCCAG CCGGAAGGGC CGAGCGCAGA AGTGGTCTTG CAACTTTATC GCCTCCATC CAGTCTATTA
ATTGTTGCCG GGAAGCTAGA GTAAGTAGTT CGCCAGTTAA TAGTTTGCGC AACGTTGTTG CCATTGCTAC
AGGCATCGTG GTGTCACGCT CGTCGTTTGG TATGGCTTCA TTCAGCTCCG GTTCCCAACG ATC

```

**GE100003**, scramble sequence in pCas-Guide vector

**Disclaimer:**

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

**RefSeq:**

[NM\\_014864](#), [NM\\_001324310](#), [NM\\_001324311](#)

**UniProt ID:**

[O75063](#)

**Synonyms:**

gxl1

**Summary:**

Responsible for the 2-O-phosphorylation of xylose in the glycosaminoglycan-protein linkage region of proteoglycans thereby regulating the amount of mature GAG chains. Sulfated glycosaminoglycans (GAGs), including heparan sulfate and chondroitin sulfate, are synthesized on the so-called common GAG-protein linkage region (GlcUA $\beta$ 1-3Gal $\beta$ 1-3Gal $\beta$ 1-4Xyl $\beta$ 1-O-Ser) of core proteins, which is formed by the stepwise addition of monosaccharide residues by the respective specific glycosyltransferases. Xylose 2-O-phosphorylation may influence the catalytic activity of B3GAT3 (GlcAT-I) which completes the precursor tetrasaccharide of GAG-protein linkage regions on which the repeating disaccharide region is synthesized.[UniProtKB/Swiss-Prot Function]

