

Product datasheet for **KN201959LP**

XBP1 Human Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 Luciferase-Puro donor, 1 scramble control
Donor DNA:	Luciferase-Puro
Symbol:	XBP1
Locus ID:	7494
Components:	<p>KN201959G1, XBP1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: ACTTTAGGGGTTCCCGTCGGC</p> <p>KN201959G2, XBP1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CCCGTCGGCCGGGTTCCGGC</p> <p>KN201959LPD, donor DNA containing left and right homologous arms and Luciferase-Puro functional cassette.</p>

Homologous arm and Luciferase-Puro sequences:

pUC vector backbone in gray; Left arm sequence in blue; Luciferase-Puro in green; Right arm in violet

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GACTTCTATT CCGCAGAATT TCTTTCCAGG CTTTTTCTT TTTCTTTTTT TGAGACGGAG TCTCGCTCTG
TCGCCCAGGC CGGGGTGCAG TGGCGCGATC TCGGCTCACT GAAACCTCTG TCCAGTCTTT TCGAACCCAA
GGCCCAACTG CGCTCTATCT CGACTTTCGG CTCCACTCGG ATCCCGAAGT GGCGCACGAG ATAAAAATGT
GTCAGGCTGA GGTAATTCTC TGTTAGTCCC GGTAATAAATT CGTCAGTCTG GAAAGCTCTC GGTTTGGAA
TAAATCTGT CACTCCGGAT GAAATAAAGT CCGTTAAGG GGGGAAAATC CGTTTGTGGA GGACACGCTC
CCGCACGTAA CCCCCGCGG AAAATGACCC CAAGTACCTT TGGCCAGGGA TTGCCGCTGC CACCCGGAC
TCCATAGCCA CGGTCCTGAA ACGCCCCGCC GGGCAGGCCG GACCAATGGA CGCCGAGCTC GGCCGTGCGT
CACGCGACGC TGGCCAATCG CGGAGGGCCA CGACCGTAGA AAGGCCGGGC GCGGCGAGGC TGGGCGCTGG
GCGGCTGCGG CGCGCGGTGC GCGGTGCGTA GTCTGGAGCT CTCATGGTGC CAGCCCAGAG AGGGGCCAGC
CCGGAGGCAG CGAGCGGGGG GCTGCCCCAG GCGCGCAAGC GACAGCGCCT CACGCACCTG AGCCCCGAGG
AGAAGGCGCT GAGGAGGTGG GCGAGGGGCC GGGGTCTGGG GCCAGATCTG AAGCCGGGAC TAGGGACAGG
GGCAGGGGCA GGGGCTGGGA GCGGGGACCC AGCACTGGCC GCCCCGACAG GCTCCGTCGC CTTTGGCCTG
GCGGGTCTGT GCCAGCGTGG CCGGGGGCGG GGCAGGAAGC CCGGACTGAC CGGATCCGCC ACGCTGGGAA
CCTAGGGCGG CCCAGGGCTC TTTTCTGTAC TTTTAACTC TCTCGTTAGA GATGACCAGA GCTGGGGATG
CGGGCACCTG TCTTCCAGGC CCTCTTGCTG TGTGGCCGCA GACTGGTGGT TCAGCCTCTT AACTCGGACA
TGAGGTCGAA TAATCTGTTT TGGTTTACTG CTATTTCTGG AGAGGCGCGG AGCTGAAATA ACAGAGCTGT
TGAAAGGGCT GGGAAATTCTG CGAGGCTCAC TGGTCTAGCT CAGTATCTGC GTTCTTAAAA TGGAACCTAC
TTCATGAGGT

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GE100003, scramble sequence in pCas-Guide vector



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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_001079539](#), [NM_005080](#)

UniProt ID: [P17861](#)

Synonyms: TREB-5; TREB5; XBP-1; XBP2

Summary: This gene encodes a transcription factor that regulates MHC class II genes by binding to a promoter element referred to as an X box. This gene product is a bZIP protein, which was also identified as a cellular transcription factor that binds to an enhancer in the promoter of the T cell leukemia virus type 1 promoter. It may increase expression of viral proteins by acting as the DNA binding partner of a viral transactivator. It has been found that upon accumulation of unfolded proteins in the endoplasmic reticulum (ER), the mRNA of this gene is processed to an active form by an unconventional splicing mechanism that is mediated by the endonuclease inositol-requiring enzyme 1 (IRE1). The resulting loss of 26 nt from the spliced mRNA causes a frame-shift and an isoform XBP1(S), which is the functionally active transcription factor. The isoform encoded by the unspliced mRNA, XBP1(U), is constitutively expressed, and thought to function as a negative feedback regulator of XBP1(S), which shuts off transcription of target genes during the recovery phase of ER stress. A pseudogene of XBP1 has been identified and localized to chromosome 5. [provided by RefSeq, Jul 2008]

Product images:

