

Product datasheet for **KN202416**

CTCF 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:	CTCF
Locus ID:	10664
Components:	<p>KN202416G1, CTCF gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: ACTTACCAGAGACGCCGGGA</p> <p>KN202416G2, CTCF gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: AGTTTCGGACTCCTCCACAA</p> <p>KN202416D, 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

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TAACATCCTG AGTCACCAAT TTCCTGTAA TTGGGTTGGA TCTAGAGACT TGATTGGTTT CAGAGTTTTG
GAGTTTGTTC GACAAAATTG CATTATAGGT AGTGGTTTTT TCTTTTTCTT TTTTTTTTTT TTTTTTTTGA
GATGGAGTCT TGCTCTGTCC CCCACGCTGG AGCGCAGTGG TGCAATCTCG GCTCACTGCA AGCTCCGCCT
CCTGGATTCA AGCTATTCTT CTGCCTCAGC CTCCCGAGTA GCTGGGACTA CAGGCGCCCG CCACCATGCC
TGGCTAATTT TTTTGTATT TTTAGTAGAG ACGGGGTTTC ACCGTGTTAG CCAGGATGTT CTCGATCTCC
TGACCTCGTG ATCCGCCCGC CTCAGCCTCC CAAAGTGCTG GGATTACAGG CGTGAGCCAC TGCACCTGGC
CAGTAGTGGT TGTTCTTTC ATCAAGAGGC ACATGTCTGT TGTGTCTTTT TTAATATTAA CAACCATTGA
TGCCTAATTC ATTCACCAA GGGTCTTTTT GTTTTAAAT GTATATTTT ATTTAGACAT GCTTTGCTTT
AAATAACAAT CTGTGTTCTC CCTTAATAAA GGCAGGGGAA CAGACGGATG GGGGTGAGGT GGTCCAGGAT
GTCAACAGCA GTGTACAGAT GGTGATGATG GAACAGCTGG ACCCCACCCT TCTTCAGATG AAGACTGAAG
TAATGGAGGG CACAGTGGCT CCAGAAGCAG AGGCTGCTGT GGACGATACC CAGATTATAA CTTTACAGGT
TGTAATATG GAGGAACAGC CCATAACAT AGGAGAAGT CAGCTTGTTT AAGTACCTGT TCCTGTGACT
GTACCTGTTG CTACCACTC AGTAGAAGAA CTTCAGGGGG CTTATGAAAA TGAAGTGTCT AAAGAGGGCC
TTGCGGAAAG TGAACCATG ATATGCCACA CCTACCTT GCCTGAAGGG TTTCAGTGG TAAAGTGGG
GGCCAATGGA GAGGTGGAGA CACTAGAACA AGGGGAAGT CCACCCAGG AAGATCCTAG TTGGCAAAAA
GACCCAGACT ATCAGCCACC AGCCAAAAA ACAAAGAAAA CCAAAAAGAG CAAACTGCGT TATACAGAGG
AGGGCAAAGA TGATAGTGTG TCTGTCTACG ATTTTGAGGA AGAACAGCAG GAGGGTCTGC TATCAGAGGT
TAATGCAGAG

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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_001191022](#), [NM_006565](#), [NM_001363916](#)

UniProt ID: [P49711](#)

Synonyms: MRD21

Summary: This gene is a member of the BORIS + CTCF gene family and encodes a transcriptional regulator protein with 11 highly conserved zinc finger (ZF) domains. This nuclear protein is able to use different combinations of the ZF domains to bind different DNA target sequences and proteins. Depending upon the context of the site, the protein can bind a histone acetyltransferase (HAT)-containing complex and function as a transcriptional activator or bind a histone deacetylase (HDAC)-containing complex and function as a transcriptional repressor. If the protein is bound to a transcriptional insulator element, it can block communication between enhancers and upstream promoters, thereby regulating imprinted expression. Mutations in this gene have been associated with invasive breast cancers, prostate cancers, and Wilms' tumors. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2010]

Product images:

