

## Product datasheet for **KN208266**

### DFFB 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:** DFFB  
**Locus ID:** 1677  
**Components:** **KN208266G1**, DFFB gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CCGAGGAAAGTTCGGCGTGCC  
**KN208266G2**, DFFB gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GCCCGCAGCTTCACGCTCTT  
**KN208266D**, donor DNA containing left and right homologous arms and GFP-puro functional cassette.

Homologous arm and GFP-puro sequences:

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

```
GATCGTTGGG AACCGGAGCT GAATGAAGCC ATACCAAACG ACGAGCGTGA CACCACGATG CCTGTAGCAA
TGGCAACAAC GTTGCACAAA CTATTAACCTG GCGAACTACT TACTCTAGCT TCCCAGCAAC AATTAATAGA
CTGGATGGAG GCGGATAAAG TTGCAGGACC ACTTCTGCGC TCGGCCCTTC CGGCTGGCTG GTTTATTGCT
GATAAATCTG GAGCCGGTGA GCGTGGTTCT CGCGGTATCA TTGCAGCACT GGGGCCAGAT GGTAAGCCCT
CCCGTATCGT AGTTATCTAC ACGACGGGGA GTCAGGCAAC TATGGATGAA CGAAATAGAC AGATCGCTGA
GATAGGTGCC TCACTGATTA AGCATTGGTA ACTGTACAGC CAAGTTTACT CATATATACT TTAGATTGAT
TTAAAACCTC ATTTTAAATT TAAAAGGATC TAGGTGAAGA TCCTTTTTGA TAATCTCATG ACCAAAATCC
CTTAACGTGA GTTTTCGTTC CACTGAGCGT CAGACCCCGT AGAAAAGATC AAAGGATCTT CTTGAGATCC
TTTTTTCTG CGCGTAATCT GCTGCTTGCA AACAAAAAAA CCACCGCTAC CAGCGGTGGT TTGTTTGCCG
GATCAAGAGC TACCAACTCT TTTTCCGAAG GTAAGTGGCT TCAGCAGAGC GCAGATACCA AATACTGTTC
TTCTAGTGTA GCCGTAGTTA GGCCACCACT TCAAGAACTC TGTAGCACCG CCTACATACC TCGCTCTGCT
AATCCTGTTA CCAGTGGCTG CTGCCAGTGG CGATAAGTCG TGTCTTACCG GGTGGACTC AAGACGATAG
TTACCGGATA AGGCGCAGCG GTCGGGCTGA ACGGGGGGTT CGTGACACACA GCCCAGCTTG GAGCGAACGA
CCTACACCGA ACTGAGATAC CTACAGCGTG AGCTATGAGA AAGCGCCACG CTTCCGGAAG GGAGAAAGGC
GGACAGGTAT CCGGTAAGCG GCAGGGTCCG AACAGGAGAG CGCACGAGGG AGCTTCCAGG GGGAAACGCC
TGGTATCTTT ATAGTCCTGT CGGGTTTCGC CACCTCTGAC TTGAGCGTCG ATTTTGTGTA TGCTCGTCAG
GGGGGCGGAG CCTATGGAAA AACGCCAGCA ACGCGGCCTT TTTACGGTTC CTGGCCTTTT GCTGGCCTTT
TGCTCACATG TTCTTCCCTG CGTTATCCCC TGATTCTGTG GATAACCGTA TTACCGCCTT TGAGTGAGCT
GATACCGCTC GCCGCAGCCG AACGACCGAG CGCAGCGAGT CAGTGAGCGA GGAAGCGGAA GAGCGCCCAA
TACGCAAACC GCCTCTCCCC GCGCGTTGGC CGATTTCATTA ATGCAGCTGG CACGACAGGT TTCCCAGCTG
GAAAGCGGGC AGTGAGCGCA ACGCAATTAA TGTGAGTTAG CTCACTCATT AGGCACCCCA GGCTTTACAC
TTTATGCTTC CGGCTCGTAT GTTGTGTGGA ATTGTGAGCG GATAACAATT TCACACAGGA AACAGCTATG
ACCATGATTA CGCCAAGCTC CTTCTCTTTC CAGCCCTTCC TCTTCTACTG ACTGACTGAC TGGAAGACAC
```



[View online »](#)

ACCTCCCCAG GGGCGTGCGG GACCCGGCTC TCGTGGACTT CCTCGGCAGC CGCCGCTTCC TCAGACGGAA  
 CTCGGGGGGC GCCCCTTCCG CCGCCCCAGG CCGCCTTGCA CCCCAAGCTG CTGCGGCAGT GACAGGGAAG  
 AAGCAGACCC GGCCACCTCT GCCCATAGCC CCGGCCGCGC CCTCCACTCT CATGACAACC AAGCCCAGCC  
 CTGGGCCAGG GCCTCTGCGC GTGCGCGACC CCGCCCCACC CCAGGCCGCG CCTGCGCACA AGGGGAGGGC  
 TCCGCTACTC TGGCCCTCAG GGTGTGTAG TTTCCGGGGC CACGGCACCT GGCACACCA GGTGGCGTCC  
 CGCCTTGGCT TTCCTGAGCC TTCTGAGTAA GGTAAATGTG TGTCCGTGGG GCGACGCCTG CGCACAAGAC  
 CGCGTCCGGC CTCACTTTTC CCAGGCCCTC TGGGTAATGT AGTTTCCGGG ATCGGCACCT GGCCTGTGCC  
 AGCTTGCAGA GCTCACCAGG TGCAGACCCC TCGGCCCAGG GCGAGGACGG ATCTGAGCAG CTGGGCAGCA  
 GGTGCCACCG CCTGTGGGAC CCAGAGGGCT TGAGGACATC TGCAACTAGC ATGGAGAGCG ACGAGAGCGG  
 CCTGCCCGCC ATGGAGATCG AGTGCCGCAT CACCGGCACC CTGAACGGCG TGGAGTTCGA GCTGGTGGGC  
 GCGGAGAGG GCACCCCGA GCAGGGCCGC ATGACCAACA AGATGAAGAG CACCAAAGGC GCCCTGACCT  
 TCAGCCCTA CTGCTGAGC CACGTGATGG GCTACGGCTT CTACCACTTC GGCACCTACC CCAGCGGCTA  
 CGAGAACCC TTCCTGCACG CCATCAACAA CGGCGGTAC ACCAACACCC GCATCGAGAA GTACGAGGAC  
 GGGCGGTGC TGCACGTGAG CTTGAGCTAC CGCTACGAGG CCGGCCGCGT GATCGGCGAC TTCAAGGTGA  
 TGGGCACCG CTTCCCGAG GACAGCGTGA TCTTACCAGA CAAGATCATC CGCAGCAACG CCACCGTGGG  
 GCACCTGCAC CCCATGGCG ATAACGATCT GGATGGCAGC TTCACCCGCA CCTTCAGCCT GCGCGACGGC  
 GGCTACTACA GCTCCGTGGT GGACAGCCAC ATGCACTTCA AGAGCGCCAT CCACCCAGC ATCCTGCAGA  
 ACGGGGGCC CATGTTCCGC TTCGCGCGG TGGAGGAGGA TCACAGCAAC ACCGAGCTGG GCATCGTGGG  
 GTACCAGCAC GCCTTCAAGA CCCCGGATGC AGATGCCGTG GAAGAAAGAG TTTAAGAATT CCGATCATAT  
 TCAATAACCC TTAATATAAC TTCGTATAAT GTATGCTATA CGAAGTTATT AGGTCTGAAG AGGAGTTTAC  
 GTCCAGCAA GCTTAGGATC TCGACCTCGA AATTCTACCG GGTAGGGGAG GCGCTTTTCC CAAGGCAGTC  
 TGGAGCATGC GCTTAGCAG CCCCCTGTC ACTTGGCGCT ACACAAGTGG CCTCTGGCTC CGCACACATT  
 CCACATCCAC CGGTAGCGCC AACCGCTCC GTTCTTGGT GGCCCTTCG GCCACCTTC TACTCTCCC  
 CTAGTCAGGA AGTTCACCCG CCGCCCGCAG CTCGCGTCTG GCAGGACGTG CCAAATGGAA GTAGCAGTCT  
 TCACTAGTCT CGTGCAGATG GACAGCACCG CTGAGCAATG GAAGCGGGTA GGCCTTTGGG GCGCGGCCA  
 ATAGCAGCTT TGCTCCTTCG CTTTCTGGGC TCAGCAGCTG GGAAGGGTGG GTCCGGGGG GGGCTCAGGG  
 GCGGGCTCAG GGGCGGGGCG GGCGCCGAA GGTCTCCGG AGGCCCGCA TTCTGCACG TTCAAAGCG  
 CACGTCTGCC GCGCTGTCT CTTCTTCCCT ATCTCCGGG CTTTCCGACT GCATCCATCT AGATCTCGAG  
 CAGCTGAAGC TTACCATGAC CGAGTACAAG CCCACGGTGC GCCTCGCCAC CCGCGACGAC GTCCCCAGGG  
 CCGTACGCAC CCTCGCCGC GCGTTCGCG ACTACCCGC CACGCGCCAC ACCGTCGATC CGGACCGCA  
 CATCGAGCGG GTCACCGAGC TGCAAGAACT CTTCTCAGC CCGTCCGGG TCGACATCGG CAAGGTGTGG  
 GTCGCGGACG ACGCGCCGC GGTGGCGGTC TGGACCAGC CCGAGAGCGT CGAAGCGGGG GCGGTGTTCG  
 CCGAGATCGG CCCGCGCATG GCCGAGTTGA GCGGTTCCCG GCTGGCCGCG CAGCAACAGA TGGAAGGCCT  
 CCTGGCGCG CACCGGCCA AGGAGCCCG GTGGTTCCTG GCCACCGTCG GCGTCTCGCC GACCACCCAG  
 GGCAAGGGTC TGGGAGCGC CGTCGTGCTC CCCGAGTGG AGGCCGGCGA GCGCGCCGGG GTGCCCGCCT  
 TCCTGGAGAC CTCGCGGCC CACAACCTCC CTTTCTACGA GCGGCTCGGC TTCACCGTCA CCGCCGACGT  
 CGAGGTGCC GAAGGACCG GCACCTGGTG CATGACCCG AAGCCCGTG CCTGACGCC GCCCCACGAC  
 CCGCAGCGCC CGACCGAAAG GAGCGCACGA CCCCATGCAT CGATGATATC AGATCCCCG GATGCAGAAA  
 TTGATGATCT ATTAACAAT AAAGATGTCC ACTAAAATGG AAGTTTTTCC GTGCATACTT TGTTAAGAAG  
 GGTGAGAACA GAGTACCTAC ATTTTGAATG GAAGGATTGG AGCTACGGG GTGGGGTGG GGTGGGATTA  
 GATAAATGCC TGCTCTTAC TGAAGGCTCT TTAATATTGC TTTATGATAA TGTTTATAG TTGGATATCA  
 TAATTTAAAC AAGCAAACC AAATTAAGGG CCAGCTCATT CCTCCACTC ATGATCTATA GATCTATAGA  
 TCTCTCGTGG GATCATTGTT TTTCTTGA TTCCACTTT GTGGTTCTAA GACTGTGGT TTCAAATGT  
 GTCAGTTTCA TAGCCTGAAG AACGAGATCA GCAGCCTCTG TTCCACATAC ACTTCATTCT CAGTATTGTT  
 TTGCCAAGTT CTAATTCAT CAGAAGCTGG TCGAGATCCG GAACCTTAA TATAACTTCG TATAATGTAT  
 GCTATACGAA GTTATTAGT CCCTCGAAGA GGTTCACTAT GCTGCGCAAG GGCTGTCTCC GCTTCCAGGT  
 GCCCGTGGG CTAGGCGGG ACGGCCGTC GGGGAGCGT GTGGGAGAA TAGGAGTGC CGCTTTTCT  
 CTTCCAAAAC GGAGGTGCA GCGGCGCCC GGGCGGGTA GTTTTCGTT GCCTCAGCCG CTAGGACCCC  
 GGGCCCCCG AGCCTGGGGT TCCTGAGCGT GGCTTCAGAA CGCAGGGGG TTGGGGGACG ACCTGGATCA  
 CCCCTTCCCT CTTCCACCT CTCGGGCAG ACAGCCCTGC ATCAGAGCTA GGAGACCCG GTAGAGTGCC  
 AGGTAAGTGC ACGCGGGTGC ACGGCTGCTC TGCCTGTCCG GCCTCAGCTT CCCCTTGTAG AACATGAAAG  
 GCTTGGCTAG GTGGGCTCTG CAGGCCCTT CCAGCCCTCG CAGCTGGGGA TTGCAATCGT CACCTTATTC

TAGGTTGGTT TTCTTTTTAG ACCAGTACTA GGGTTACCAG GTGTGCATTG CCGGGGTCGG TCGGGGTGGG  
 GTGGGAGTAG CCATAAAATG CCTAAAACCTG ACCAGTGCAG AGTAACAGGG AACCGGACTC CAACAAATTA  
 ACAGTGCCAA CGACAGTCTT CACTGACTGA CTGACTGGAA AGTCCTCTCC ACTGACTGTA GCCTCCAATT  
 CACTGGCCGT CGTTTTACAA CGTCGTGACT GGGAAAACCC TGGCGTTACC CAACTTAATC GCCTTGCCAGC  
 ACATCCCCCT TTCGCCAGCT GGCCTAATAG CGAAGAGGCC CGCACCAGATC GCCCTTCCCA ACAGTTGCCG  
 AGCCTGAATG GCGAATGGCG CCTGATGCGG TATTTTCTCC TTACGCATCT GTGCGGTATT TCACACCGCA  
 TAGCTCAAAG CAACCATAGT ACGCGCCCTG TAGCGGCCTG TTAAGCGCGG CGGGTGTGGT GGTTACGCGC  
 AGCGTGACCG CTACACTTGC CAGCGCCCTA GCGCCCGCTC CTTTCGCTTT CTTCCCTTCC TTTCTCGCCA  
 CGTTCCGCGG CTTTCCCGT CAAGCTCTAA ATCGGGGGCT CCCTTTAGGG TTCCGATTTA GTGCTTTACG  
 GCACCTCGAC CCCAAAAAAC TTGATTTGGG TGATGGTTCA CGTAGTGGGC CATCGCCCTG ATAGACGGTT  
 TTTCCGCCCT TGACGTTGGA GTCCACGTTT TTTAATAGTG GACTCTTGTT CCAAAGTGA ACAACTCA  
 ACCCTATCTC GGGCTATTCT TTTGATTTAT AAGGGATTTT GCCGATTTG GCCTATTGGT TAAAAAATGA  
 GCTGATTTAA CAAAAATTA ACGCGAATTT TAACAAAATA TTAACGTTTA CAATTTTATG GTGCACCTC  
 AGTACAATCT GCTCTGATGC CGCATAGTTA AGCCAGCCCG GACACCCGCC AACACCCGCT GACGCGCCCT  
 GACGGGCTTG TCTGCTCCG GCATCCGCTT ACAGACAAGC TGTGACCGTC AACGGGAGCT GCATGTGTCA  
 GAGGTTTTCA CCGTCATCAC CGAAACGCGC GACCCGAAAG GGCCCTCGTA TACGCCTATT TTTATAGGTT  
 AATGTCATGA TAATAATGGT TTCTTAGACG TCAGGTGGCA CTTTTCGGGG AAATGTGCGC GGAACCCCTA  
 TTTGTTTTATT TTTCTAAATA CATTCAAATA TGTATCCGT CATGAGACAA TAACCCTGAT AAATGCTTCA  
 ATAATATTGA AAAAGGAAGA GTATGAGTAT TCAACATTTT CGTGTCGCCC TTATTCCTT TTTTGGCGCA  
 TTTTGCCTTC CTGTTTTTGC TCACCCAGAA ACGCTGGTGA AAGTAAAAGA TGCTGAAGAT CAGTTGGGTG  
 CACGAGTGGG TTACATCGAA CTGGATCTCA ACAGCGGTAA GATCCTTGAG AGTTTTCGCC CCGAAGAACG  
 TTTTCCAATG ATGAGCACTT TTAAAGTTCT GCTATGTGGC GCGGTATTAT CCCGTATTGA CGCCGGGCAA  
 GAGCAACTCG GTCGCCGAT ACACTATTCT CAGAATGACT TGGTTGAGTA CTCACCAGTC ACAGAAAAGC  
 ATCTTACGGA TGGCATGACA GTAAGAGAAT TATGCAAGTGC TGCCATAACC ATGAGTGATA ACACTGCGC  
 CAACTTACTT CTGACAACGA TCGGAGGACC GAAGGAGCTA ACCGCTTTTT TGCAACAACAT GGGGGATCAT  
 GTAACCTGCC TT

**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\\_001004285](#), [NM\\_001004286](#), [NM\\_001282669](#), [NM\\_001320132](#), [NM\\_001320136](#),  
[NM\\_004402](#), [NR\\_104222](#), [NR\\_135150](#), [NR\\_135151](#), [NR\\_135152](#)

**UniProt ID:**

[O76075](#)

**Synonyms:**

CAD; CPAN; DFF-40; DFF2; DFF40

**Summary:**

Apoptosis is a cell death process that removes toxic and/or useless cells during mammalian development. The apoptotic process is accompanied by shrinkage and fragmentation of the cells and nuclei and degradation of the chromosomal DNA into nucleosomal units. DNA fragmentation factor (DFF) is a heterodimeric protein of 40-kD (DFFB) and 45-kD (DFFA) subunits. DFFA is the substrate for caspase-3 and triggers DNA fragmentation during apoptosis. DFF becomes activated when DFFA is cleaved by caspase-3. The cleaved fragments of DFFA dissociate from DFFB, the active component of DFF. DFFB has been found to trigger both DNA fragmentation and chromatin condensation during apoptosis. Alternatively spliced transcript variants encoding distinct isoforms have been found for this gene but the biological validity of some of these variants has not been determined. [provided by RefSeq, Sep 2013]

Product images:

