

## Product datasheet for **KN216476**

### CFTR 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:	CFTR
Locus ID:	1080
Components:	<p><b>KN216476G1</b>, CFTR gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GAAGGTGGCCAACCGAGCTT</p> <p><b>KN216476G2</b>, CFTR gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: ACAACGCTGGCCTTTCCAG</p> <p><b>KN216476D</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

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GAGGAGGAAG GCAGGCTCCG GGGAAAGCTGG TGGCAGCGGG TCCTGGGTCT GGC GGACCCCT GACGCGAAGG
AGGGTCTAGG AAGCTCTCCG GGGAGCCGGT TCTCCCGCCG GTGGCTTCTT CTGTCCTCCA GCGTTGCCAA
CTGGACCTAA AGAGAGGCCG CGACTGTCGC CCACCTGCGG GATGGGCCTG GTGCTGGGCG GTAAGGACAC
GGACCTGGAA GGAGCGCGCG CGAGGGAGGG AGGCTGGGAG TCAGAATCGG GAAAGGGAGG TGCGGGGCGG
CGAGGGAGCG AAGGAGGAGA GGAGGAAGGA GCGGGAGGGG TGCTGGCGGG GGTGCTAGT GGGTGGAGAA
AGCCGCTAGA GCAAATTTGG GGCCGGACCA GGCAGCACTC GGCTTTTAAC CTGGGCAGTG AAGGCCGGGG
AAAGAGCAAA AGGAAGGGGT GGTGTGCGGA GTAGGGGTGG GTGGGGGAA TTGGAAGCAA ATGACATCAC
AGCAGGTCAG AGAAAAGGG TTAGCGGCA GGCACCCAGA GTAGTAGGTC TTTGGCATTG GGAGCTTGAG
CCCAGACGGC CCTAGCAGGG ACCCCAGCGC CCGAGAGACC ATCATTATTG GTTTTGAAGG AAAATGTGGG
TATTGTAGAA TAAAACAGAA AGCATTAAAG AGAGATGGAA GAATGAACTG AAGCTGATTG AATAGAGAGC
CACATCTACT TGCAACTGAA AAGTTAGAAT CTCAAGACTC AAGTACGCTA CTATGCACTT GTTTTATTTT
ATTTTTCTAA GAACTAAA ATACTTGTTA ATAAGTACCT AAGTATGGTT TATTGGTTTT CCCCTTCAT
GCCTTGACA CTTGATTGTC TTCTTGCCAC ATACAGGTGC CATGCCTGCA TATAGTAAGT GCTCAGAAAA
CATTCTTGA CTGAATTCAG CCAACAAAAA TTTTGGGTA GGTAGAAAAT ATATGCTTAA AGTATTTATT
GTTATGAGAC TGATATATC TAGTATTTGT CACAGGTAAT TGATTCTTCA AAAATTGAAA GCAAATTTGT
TGAAATATTT ATTTTGAAGA AAGTTACTTC ACAAGCTATA AATTTTAAAA GCCATAGGAA TAGATACCGA
AGTTATATCC AACTGACATT TAATAATTG TATTCATAGC CTAATGTGAT GAGCCACAGA AGCTTGCAAA
CTTTAATGAG
```

**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\\_000492](#)

**UniProt ID:** [P13569](#)

**Synonyms:** ABC35; ABCC7; CF; CFTR/MRP; dj760C5.1; MRP7; TNR-CFTR

**Summary:** This gene encodes a member of the ATP-binding cassette (ABC) transporter superfamily. The encoded protein functions as a chloride channel, making it unique among members of this protein family, and controls ion and water secretion and absorption in epithelial tissues. Channel activation is mediated by cycles of regulatory domain phosphorylation, ATP-binding by the nucleotide-binding domains, and ATP hydrolysis. Mutations in this gene cause cystic fibrosis, the most common lethal genetic disorder in populations of Northern European descent. The most frequently occurring mutation in cystic fibrosis, DeltaF508, results in impaired folding and trafficking of the encoded protein. Multiple pseudogenes have been identified in the human genome. [provided by RefSeq, Aug 2017]

### Product images:

