

## Product datasheet for **KN200478**

### ERCC1 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:	ERCC1
Locus ID:	2067
Components:	<p><b>KN200478G1</b>, ERCC1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: ATTTGTGATACCCCTCGACG</p> <p><b>KN200478G2</b>, ERCC1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TTGCTGGCGGCCCTGAGGGC</p> <p><b>KN200478D</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 TCTTACCGT 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 TCCCCGAAA 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
AGCGGTACAG CTGCGGTAA CCACCACACC CGCCGCGCTT AATGCGCCGC TACAGGGCGC GACTATGGT
TGCTTTGACG TATGCGGTGT GAAATACCGC ACAGATCGCT AAGGAGAAAA TACCGCATCA GGCGCCATC
GCCATTCAGG CTGCGCAACT GTTGGGAAGG GCGATCGGTG CGGGCCTCTT CGTATTACG CCAGCTGGCG
AAAGGGGAT GTGCTGCAAG GCGATTAAGT TGGTAACGC CAGGGTTTTC CCAGTACGA CGTTGTAATA
CGACGGCCAG TGAATTGGAG GCTACAGTCA GTGGAGAGGA CTTTCACAG CTGTCGCCGT GCTCATTTGA

```



[View online »](#)

TAACTGCCCG TTATTCATGC GACACTACAG AGATCGCCCT GCTCTATGCT CTA CTCTCCT GGGGAGCGGG  
 GCCAGAGAGG CCGAAGTGC TGCGAGCCCT GGGCCACGCT GGCCGTGCTG GCAGTGGGCC GCCTCGATCC  
 CTCTGCAGTC TTTCCCTTGA GGCTCCAAGA CCAGCAGGTG AGGCCTCGCG GCGCTGAAAC CGTGAGGCC  
 GGACCACAGG TGCGGGAGGC GGAGACTGCG GGTGGAGATT GGCCCGCGG AAGCCAATCA TTGCCGAGTC  
 TGAGAGATGG ACAAGGCCAG GCGTGGGGAG GCGTCCAGA TGCTAGCCTC GGGGGCCGA CGAACGGAAG  
 GCGGGGGATG GTGGGGACGG AGCCAATAGA ATCCGGTGGG GGCGAGGGG GGAGCGATGG GACTTGTGGA  
 CCTGTAAGGG GCGGGGCGAG CCGAAGGTGG AGGTCAAAGG GCGGTGGCGT TACAGAGCCT CTAGCGCTGG  
 GTGTTGGGA CCTGACGCTA TGGAGCTCTC GGAGTTTTGT GGGGGACGGC TGTGAGTGGG GGGTTCCTGC  
 TGCGGGATGA GAACGTAGAC GCCAGTGGCT CACTCGCTCC TGGCACCTTC CCTTTCAGGC TCCAGACTAG  
 CATGGAGAGC GACGAGAGCG GCCTGCCCGC CATGGAGATC GAGTGCCGCA TCACCGGCAC CCTGAACGGC  
 GTGGAGTTCG AGCTGGTGGG CGGCGGAGAG GGCACCCCG AGCAGGGCCG CATGACCAAC AAGATGAAGA  
 GCACCAAAGG CGCCCTGACC TTCAGCCCT ACCTGCTGAG CCACGTGATG GGCTACGGCT TCTACCACTT  
 CGGCACCTAC CCCAGCGGCT ACGAGAACC CTTCCTGCAC GCCATCAACA ACGGCGGCTA CACCAACACC  
 CGCATCGAGA AGTACGAGGA CGGCGGCGTG CTGCACGTGA GCTTCAGCTA CCGCTACGAG GCCGGCCGG  
 TGATCGGCGA CTTCAAGGTG ATGGGCACCG GCTTCCCGA GGACAGCGTG ATCTTACC ACAGATCAT  
 CCGCAGCAAC GCCACCGTGG AGCACCTGCA CCCCATGGG GATAACGATC TGGATGGCAG CTTACCCCG  
 ACCTTCAGCC TGCGCGACGG CGGCTACTAC AGCTCCGTGG TGGACAGCCA CATGCACCTT AAGAGCGCCA  
 TCCACCCAG CATCCTGCAG AACGGGGGCC CCATGTTCCG CTTCCGGCCG GTGGAGGAGG ATCACAGCAA  
 CACCGAGCTG GGCATCGTGG AGTACCAGCA CGCCTTCAAG ACCCCGGATG CAGATGCCGG TGAAGAAAGA  
 GTTAAAGAAT TCCGATCATA TTCAATAACC CTTAATATAA CTTCTGATAA TGTATGCTAT ACGAAGTTAT  
 TAGGTCTGAA GAGGAGTTTA CGTCCAGCCA AGCTTAGGAT CTCGACCTCG AAATTCTACC GGGTAGGGGA  
 GCGCTTTTC CCAAGGCAGT CTGGAGCATG CGCTTATGCA GCCCGCTGG CACTTGGCGT TACACAAGTG  
 GCCTCTGGCC TCGCACACAT TCCACATCCA CCGGTAGCGC CAACCGGCTC CGTTCCTTGG TGGCCCTTC  
 GCGCCACCTT CTACTCTCC CCTAGTCAGG AAGTTCGCC CCGCCCGCA GCTCGCGTCG TGCAGGACGT  
 GACAAATGGA AGTAGCACGT CCACTAGTC TCGTGCAGAT GGACAGCACC GCTGAGCAAT GGAAGCGGGT  
 AGGCCTTTGG GGCAGCGGCC AATAGCAGCT TTGCTCCTT GCTTTCTGGG CTCAGCAGCT GGAAGGGTG  
 GGTCCGGGGG CGGGCTCAGG GCGGGCTCA GGGGCGGGG GGGCGCCGA AGGTCTCCG GAGGCCGGC  
 ATTCTGCACG CTTCAAAGC GCACGTCTGC CGCGCTGTT TCCTCTTCT CATCTCCGG CCTTTCGACC  
 TGCATCCATC TAGATCTCGA GCAGCTGAAG CTTACCATGA CCGAGTACAA GCCACGGTG CGCCTCGCCA  
 CCCGCGACGA CGTCCCAGG GCCGTACGCA CCCTCGCCG CGCGTTCGCC GACTACCCG CCACGCGCCA  
 CACCGTCGAT CCGGACCGCC ACATCGAGCG GGTACCAGG CTGCAAGAAC TCTTCTCAC GCGCGTCGGG  
 CTCGACATCG GCAAGGTGTG GGTGCGGAC GACGCGCCG CCGTGGCGGT CTGGACCACG CCGGAGAGCG  
 TCGAAGCGGG GCGGTGTTT GCCGAGATCG GCCCGCGCAT GGCCGAGTTG AGCGGTTCCG GGCTGGCCG  
 GCAGCAACAG ATGGAAGGCC TCCTGGCGCC GCACCGGCC AAGGAGCCCG CGTGGTTCTT GGCCACCGTC  
 GCGGTCTCGC CCGACCACA GGGCAAGGGT CTGGGACGCG CCGTCTGCT CCCCAGGAGT GAGGCGGCCG  
 AGCGCGCCGG GGTGCCCGCC TTCCTGGAGA CCTCCGCGC CCACAACCTC CCCTTCTACG AGCGGCTCGG  
 CTTACCGTCC ACCGCGACG TCGAGGTGCC CGAAGGACCG CGCACCTGGT GCATGACCCG CAAGCCCGGT  
 GCCTGACGCC CGCCCCAGCA CCCGACGCG CCGACCGAAA GGAGCGCACG ACCCATGCA TCGATGATAT  
 CAGATCCCCG GGATGCAGAA ATTGATGATC TATTAACAA TAAAGATGTC CACTAAAATG GAAGTTTTTC  
 CTGTCATACT TTGTTAAGAA GGGTGAGAAC AGAGTACCTA CATTGTAAT GGAAGGATTG GAGCTACGGG  
 GGTGGGGGTG GGGTGGGATT AGATAAATGC CTGCTCTTTA CTGAAGGCTC TTTACTATTG CTTTATGATA  
 ATGTTTCATA GTTGATATC ATAATTTAAA CAAGCAAAAC CAAATTAAGG GCCAGCTCAT TCCTCCACT  
 CATGATCTAT AGATCTATAG ATCTCTCGTG GGATCATTGT TTTTCTCTTG ATTCCCACTT TGTGGTTCTA  
 AGTACTGTGG TTTCAAATG TGTGAGTTT ATAGCCTGAA GAACGAGATC AGCAGCCTCT GTTCCACATA  
 CACTTCATTC TCAGTATTGT TTTGCCAAGT TCTAATTCCA TCAGAAGCTG GTCGAGATCC GGAACCCTTA  
 ATATAACTTC GTATAATGTA TGCTATACGA AGTTATTAGG TCCCTCGAAG AGGTTACTA GCGCGCCCTC  
 CTGGAGTGGT AGGACAAGGA GATGCGGGG CCCTGGGAGG CTGGGGGCTG TTAGGACGAA GAGGATAGGA  
 TGGGGCCTGT GGGACCAGG TGTGGTTAG TGGATTTGGG GGCCACGGAC GACTTGGGGA AACAGTCTT  
 GGTCTCCCC AGGTCCCAGT TCCCCATCT GTGAAATGGA TGGGTGGTTC TAAGAGAGGG CTAAGGCAGA  
 GGCCAGACAC TGGCATTAG CAGGTAGCCC CTGATGTGTT TTACGAGGCC AGCACCTGA TTTTCAAGA  
 CATGAATTTA TTGCTCGTGT TTAAGAATCG CCAGGTTTTG CAATCTTAAA AAAATCTACA CTTTAGACAT  
 ATTTTGTGTA ATGGAAGGAC CTGGCAATAT TGAATCTCC TTCCAAGGG AAAACAATCG ACGGTTGATG

AGCATTGGCT ATGAAGAAA GGAAAGTGGG CTAAGGATGT AGGGCATGAT GGGGGAGAGG ACCTTCCTAC  
 TCTATTTATT TATTTATTTA TTTATTTTTT TGAGACAGAG TCTCGCTCTT TTGCCCAGGC TGGAGTGCAC  
 TGGCACCATC TCGGCTCACT GCAACCTCTG CCTCCTGGTC ACTCTCGCCG GTTGGACTTT AGATCAGAAG  
 GGATCTTGCT GCCGCCGAA AGAGGAAGGG CTGGAAGAGG AAGGAGCTTG GCGTAATCAT GGTCATAGCT  
 GTTTCCTGTG TGA AATTGTT ATCCGCTCAC AATTCCACAC AACATACGAG CCGGAAGCAT AAAGTGTA  
 GCCTGGGGTG CCTAATGAGT GAGCTAACTC ACATTAATTG CGTTGCGCTC ACTGCCCGCT TTCCAGTCGG  
 GAAACCTGTC GTGCCAGCTG CATTAATGAA TCGGCCAACG CGCGGGGAGA GGCGGTTTGC GTATTGGGCG  
 CTCTTCCGCT TCCTCGCTCA CTGACTCGCT GCGCTCGGTC GTTCGGCTGC GCGGAGCGGT ATCAGCTCAC  
 TCAAAGGCGG TAATACGGTT ATCCACAGAA TCAGGGGATA ACGCAGGAAA GAACATGTGA GCAAAAAGGCC  
 AGCAAAAGGC CAGGAACCGT AAAAAGGCCG CGTTGCTGGC GTTTTTCCAT AGGCTCCGCG CCCCTGACGA  
 GCATCACAAA AATCGACGCT CAAGTCAGAG GTGGCGAAAC CCGACAGGAC TATAAAGATA CCAGGCGTTT  
 CCCCTGGAA GCTCCCTCGT GCGCTCTCCT GTTCCGACCC TGCCGCTTAC CGGATACCTG TCCGCCTTTC  
 TCCCTTCGGG AAGCGTGGCG CTTTCTCATA GCTCACGCTG TAGGTATCTC AGTTCGGTGT AGGTCGTTTCG  
 CTCCAAGCTG GGCTGTGTGC ACGAACCCCG CGTTCAGCCC GACCGCTGCG CCTTATCCGG TAACTATCGT  
 CTTGAGTCCA ACCCGGTAAG ACACGACTTA TCGCCACTGG CAGCAGCCAC TGGAACAGG ATTAGCAGAG  
 CGAGGTATGT AGGCGGTGCT ACAGAGTTCT TGAAGTGGTG GCCTAACTAC GGCTACACTA GAAGGACAGT  
 ATTTGGTATC TCGCTCTGC TGAAGCCAGT TACCTTCGGA AAAAGAGTTG GTAGCTCTTG ATCCGGCAAA  
 CAAACCACCG CTGGTAGCGG TGGTTTTTTT GTTTGCAAGC AGCAGATTAC GCGCAGAAAA AAAGGATCTC  
 AAGAAGATCC TTTGATCTTT TCTACGGGGT CTGACGCTCA GTGGAACGAA AACTCACGTT AAGGGATTTT  
 GGTGATGAGA TTATCAAAAA GGATCTTAC CTAGATCCTT TAAATTTAAA AATGAAGTTT TAAATCAATC  
 TAAAGTATAT ATGAGTAAAC TTGGTCTGAC AGTTACCAAT GCTTAATCAG TGAGGCACCT ATCTCAGCGA  
 TCTGTCTATT TCGTTCATCC ATAGTTGCCT GACTCCCCGT CGTGTAGATA ACTACGATAC GGGAGGGCTT  
 ACCATCTGGC CCCAGTGTG CAATGATACC GCGAGACCCA CGCTCACCGG CTCCAGATTT ATCAGCAATA  
 AACCAGCCAG CCGGAAGGGC CGAGCGCAGA AGTGGTCTG CAACTTTATC CGCCTCCATC CAGTCTATTA  
 ATTTGTTGCCG GGAAGCTAGA GTAAGTAGTT CGCCAGTTAA TAGTTTGCGC AACGTTGTTG CCATTGCTAC  
 AGGCATCGTG GTGTCACGCT CGTCGTTTGG TATGGCTTCA TTCAGCTCCG GTTCCAACG 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\\_001166049](#), [NM\\_001983](#), [NM\\_202001](#), [NM\\_001369409](#), [NM\\_001369414](#), [NM\\_001369416](#),  
[NM\\_001369419](#), [NM\\_001369408](#), [NM\\_001369410](#), [NM\\_001369411](#), [NM\\_001369412](#),  
[NM\\_001369413](#), [NM\\_001369415](#), [NM\\_001369417](#), [NM\\_001369418](#)

**UniProt ID:**

[P07992](#)

**Synonyms:**

COFS4; RAD10; UV20

**Summary:**

The product of this gene functions in the nucleotide excision repair pathway, and is required for the repair of DNA lesions such as those induced by UV light or formed by electrophilic compounds including cisplatin. The encoded protein forms a heterodimer with the XPF endonuclease (also known as ERCC4), and the heterodimeric endonuclease catalyzes the 5' incision in the process of excising the DNA lesion. The heterodimeric endonuclease is also involved in recombinational DNA repair and in the repair of inter-strand crosslinks. Mutations in this gene result in cerebrooculofacioskeletal syndrome, and polymorphisms that alter expression of this gene may play a role in carcinogenesis. Multiple transcript variants encoding different isoforms have been found for this gene. The last exon of this gene overlaps with the CD3e molecule, epsilon associated protein gene on the opposite strand. [provided by RefSeq, Oct 2009]

**Product images:**
