

## Product datasheet for **KN211884**

### MKS1 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:	MKS1
Locus ID:	54903
Components:	<p><b>KN211884G1</b>, MKS1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CATACATGGTAAGCGGTGAT</p> <p><b>KN211884G2</b>, MKS1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CGATAAAAGCTCACCGAAAG</p> <p><b>KN211884D</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 TCTTACCCTG GTTGAGATCC AGTTCGATGT
AACCCACTCG TGCACCCAAC TGATCTTCAG CATCTTTTAC TTTACCAGC GTTTCTGGGT GAGCAAAAAC
AGGAAGGCAA AATGCCGCAA AAAAGGGAAT AAGGGCGACA CGGAAATGTT GAATACTCAT ACTCTTCCTT
TTTCAATATT ATTGAAGCAT TTATCAGGGT TATTGTCTCA TGAGCGGATA CATATTTGAA TGTATTTAGA
AAAATAAACA AATAGGGGTT CCGCGCACAT TTCCCGGAAA AGTGCCACCT GACGTCTAAG AAACCATTAT
TATCATGACA TTAACCTATA AAAATAGGCG TATCACGAGG CCCTTTCGGG TCGCGGTTT CGGTGATGAC
GGTAAAACC TCTGACACAT GCAGCTCCCG TTGACGGTCA CAGCTTGCT GTAAAGCGAT 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
GGGTCGAGGT GCCGTAAAGC ACTAAATCGG AACCCATAAG GGAGCCCCCG ATTTAGAGCT TGACGGGGAA
AGCCGGCGAA CGTGCGGAGA AAGGAAGGGA AGAAAGCGAA AGGAGCGGGC GCTAGGGCGC TGGCAAGTGT
AGCGGTACAG CTGCGCGTAA CCACCACACC CGCCGCGCTT AATGCGCCGC TACAGGGCGC GACTATGGT
TGCTTTGACG TATGCGGTGT GAAATACCGC ACAGATCGCT AAGGAGAAAA TACCGCATCA GGCGCCATTC
GCCATTCAGG CTGCGCAACT GTTGGGAAGG GCGATCGGTG CGGGCCTCTT CGCTATTACG CCAGCTGGCG
AAAGGGGAT GTGCTGCAAG GCGATTAAGT TGGGTAACGC CAGGGTTTTT CCAGTACAGA CGTTGTAATA
CGACGGCCAG TGAATTGGAG GCTACAGTCA GTGGAGAGGA CTTTCACAGG CTGTCGCCGT GCTCATTTGA

```



[View online »](#)

TAACTGCCG TTATTCATGC GACACCCAAA TCATCAAAC GGCATGAGAT TCCCGAGTTC AGGGGACAAT  
 TGCTTACTTT GTTGAGGAG GACTAGATGT GAACAAGGCT GATAAATGTT GACATTCCCA AAGTGCCGGG  
 ACGCCAGACG TGAGGTTACA GCATGTCCTT CCTTTGCTAG TACAACGAAG CATGACTTGT GAATGTCACT  
 TTTTTGGCTT TTCAGGAAGC CAGTGCAGTA ACAAAGTGGC TTAATGATCC AAAACTAACA TACACAAGGT  
 AAGAATCAGT TCAATAATAA CATCGTTTCC TTCCTTACTG TTGACTTCTT TGTTTTTTCT TTCTTTGTCT  
 AGTGAATATC AACACAAAGA CTAATAAATC TTCTGACACT TTTTTTGTCT TCCAAGAATA TATTTTCTTG  
 TCTGGTAAAG GGCATCACC TTCCTGACT CCTTTGGGAA TAATGGGTGC ATTTCTTACA GTCACATCAC  
 CCGATTTTCA GGCCAAAGTT TTCACGCGTT GGGTGGAAAG CAGTGTGGCA TGGTGGAAAA GGTAGAGGGC  
 GAAGACTCAG GCCACCTGGT CCCCGTCATC ATTTCTGCAT CTATCTGTCT ATATGAAGTG GGCTGACTAG  
 CATGGAGAGC GACGAGAGCG GCCTGCCCGC CATGGAGATC GAGTGCCGCA TCACCGGCAC CCTGAACGGC  
 GTGGAGTTCG AGCTGGTGGG CGGCGGAGAG GGCACCCCGC AGCAGGGCCG CATGACCAAC AAGATGAAGA  
 GCACCAAAGG CGCCCTGACC TTCAGCCCTT ACCTGCTGAG CCACGTGATG GGCTACGGCT TCTACCACTT  
 CGGCACCTAC CCCAGCGGCT ACGAGAACC CTTCCTGCAC GCCATCAACA ACGGCGGCTA CACCAACACC  
 CGCATCGAGA AGTACGAGGA CGGCGGCGTG CTGCACGTGA GCTTCAGCTA CCGCTACGAG GCCGGCCGGC  
 TGATCGGCGA CTTCAAGGTG ATGGGCACCG GCTTCCCGA GGACAGCGTG ATCTTACCAG ACAAGATCAT  
 CCGCAGCAAC GCCACCTGGG AGCACCTGCA CCCCATGGGC GATAACGATC TGGATGGCAG CTTACCCCGC  
 ACCTTCAGCC TGC GCGACGG CGGCTACTAC AGCTCCGTGG TGGACAGCCA CATGCACCTT AAGAGCGCCA  
 TCCACCCAG CATCCTGCAG AACGGGGGCC CCATGTTTCG CTTCGCGCCG GTGGAGGAGG ATCACAGCAA  
 CACCGAGCTG GGCATCGTGG AGTACCAGCA CGCCTTCAAG ACCCCGGATG CAGATGCCGG TGAAGAAAGA  
 GTTTAAGAAT TCCGATCATA TTCAATAACC CTTAATATAA CTTCTGATAA TGTATGCTAT ACGAAGTTAT  
 TAGGTCTGAA GAGGAGTTTA CGTCCAGCCA AGCTTAGGAT CTCGACCTCG AAATTCTACC GGGTAGGGGA  
 GGCCTTTTC CCAAGGCAGT CTGGAGCATG CGCTTTAGCA GCCCGCTGG GCACATTGGC CTACACAAGT  
 GGCCTCTGGC CTCGCACACA TTCCACATCC ACCGGTAGGC GCCAACCGAC TCCGTTCTTT GGTGGCCCTT  
 TCGCGCCACC TTCTACTCCT CCCCTAGTCA GGAAGTTCCC CCCC GCCCG CAGCTCCGCT CGTGCAGGAC  
 GTGACAAATG GAAGTAGCAC GTCTACTAG TCTCGTGAG ATGGACAGCA CCGCTGAGCA ATGGAAGCGG  
 GTAGGCCTTT GGGG CAGCGG CCAATAGCAG CTTTGTCTCT TCGCTTTCTG GGCTCAGAGG CTGGGAAGGG  
 GTGGGTCCGG GGGCGGGCTC AGGGGCGGGC TCAGGGGCGG GCGGGGCGCC CGAAGGTCTT CCGGAGGCC  
 GGCATTCTGC ACGCTTCAA AGCGCACGTC TGCCGCGCTG TTCTCCTCTT CCTCATCTCC GGGCCTTTCTG  
 ACCTGCATCC ATCTAGATCT CGAGCAGCTG AAGCTTACCA TGACCGAGTA CAAGCCACG GTGCGCCTCG  
 CCACCCGCGA CGACGTCCC AGGGCCGTAC GCACCCTCGC CGCCGCGTTC GCCGACTACC CCGCCACGCG  
 CCACACCGTC GATCCGGACC GCCACATCGA GCGGGTCACC GAGCTGCAAG AACTCTTCTT CACGCGCGTC  
 GGGCTCGACA TCGGCAAGGT GTGGGTGCGG GACGACGGCG CCGCGGTGGC GGTCTGACC ACGCCGAGA  
 GCGTCAAGC GGGGCGGGTG TTCGCCGAGA TCGGCCCGC CATGGCCGAG TTGAGCGGTT CCCGGCTGGC  
 CGCGCAGCAA CAGATGGAAG GCCTCCTGGC GCCGACCGG CCAAGGAGC CCGCGTGGTT CCTGGCCACC  
 GTCGGCGTCT CGCCGACCA CCAGGGCAAG GGTCTGGGCA GCGCCGTCGT GCTCCCCGA GTGGAGGCGG  
 CCGAGCGCGC CGGGGTGCC GCCTTCTTGG AGACCTCCG GCCCACAACT CCCCCCTTCT ACGAGCGGCT  
 CGGCTTACC GTCACCGCCG ACGTCGAGGT GCCCGAAGGA CCGCGCACCT GGTGCATGAC CCGCAAGCCC  
 GGTGCCTGAC GCCCGCCCA CGACCCGACG CGCCGACCG AAAGGAGCGC ACGACCCAT GCATCGATGA  
 TATCAGATCC CCGGGATGCA GAAATTGATG ATCTATTA CAATAAAGAT GTCCACTAAA ATGGAAGTTT  
 TTCTGTCTAT ACTTTGTTAA GAAGGTGAG AACAGAGTAC CTACATTTT AATGGAAGGA TTGGAGCTAC  
 GGGGTGTTGG GTGGGTGGG ATTAGATAAA TGCTGTCTT TTAAGTGAAG CTCTTTACTA TTGCTTTATG  
 ATAATGTTTC ATAGTTGGAT ATCATAATTT AAACAAGCAA AACCAAATTA AGGGCCAGCT CATTCTCTCC  
 ACTCATGATC TATAGATCTA TAGATCTCTC GTGGGATCAT TGTTTTTCTT TTGATTCCCA CTTTGTGGTT  
 CTAAGTACTG TGGTTTCAA ATGTGTCACT TTCATAGCCT GAAGAACGAG ATCAGCAGCC TCTGTTCCAC  
 ATACACTTCA TTCTCAGTAT TGTTTTGCCA AGTTCTAATT CCATCAGAAG CTGGTCGAGA TCCGGAACCC  
 TTAATATAAC TTCGTATAAT GTATGCTATA CGAAGTTATT AGGTCCCTCG AAGAGGTTCA CTAGGCGCGC  
 CCTTGGGCGT TCGGCTTGG CTGCATTGC ACTGTGTGGC CAACTGCGAC CGTGGCGCCG TGACGGGAAC  
 GGGGGTTGC GCGCGCAGCA CCTCCGTGCG CTCCCGATCC AGCGTCTCCG TTGCCAGGAA AACAGAGCGG  
 CGCGCTTTC GCGCAGTCG CGGCGCGTCG CAGCTGTCTAT GCGGAGACC GTCTGGAGCA CTGACACCGG  
 GGAGGAGTG TATCGCTCCC GGGACCCCGT GCGCAACTTG CGCCTCCGGT AGTCGCACCG CCCCAGCCCC  
 GAGGCCCAT GCTTTTGTGT CCTTAGATCA TTCCAACCTG AGCTCGGTGT TCTGAGGTCC CCACTTTCTG  
 CTTACAATCC CGACCACTT TCCGGGCTCC CCACTTCTT CACTATCCGT ACCCCATCC ACTCACAGCC

TCTAAGAACC CCTTACAGAC CTACCCAAGT CCATTCACGT CTTTGTGCT CCCAGTTTCT CAAAGCCCTG  
 TGCCCCCAGT ACACCCTCTC CCCTTCATTC TTCCCCATAG GACGGCGCAC CCACCCACCT CCTCTCCGTT  
 GTCTGCACCC AGCACACCTT GGCAACCCTA CCTCCTCTGT TTCACTCTCG CCGGTTGGAC TTTAGATCAG  
 AAGGGATCTT GCTGCCGCC GAAAGAGGAA GGGCTGGAAG AGGAAGGAGC TTGGCGTAAT CATGGTCATA  
 GCTGTTTCCT GTGTGAAATT GTTATCCGCT CACAATTCCA CACAACATAC GAGCCGGAAG CATAAAGTGT  
 AAAGCCTGGG GTGCCTAATG AGTGAGCTAA CTCACATTAA TTGCGTTGCG CTCACTGCCC GCTTTCCAGT  
 CGGGAAACCT GTCGTGCCAG CTGCATTAAT GAATCGGCCA ACGCGCGGGG AGAGGCGGTT TGCGTATTGG  
 GCGCTCTTCC GCTTCCTCGC TCACTGACTC GGTGCGCTCG GTCGTTTCGGC TCGGGCGAGC GGTATCAGCT  
 CACTCAAAGG CGGTAATACG GTTATCCACA GAATCAGGGG ATAACGCAGG AAAGAACATG TGAGCAAAAAG  
 GCCAGCAAAA GGCCAGGAAC CGTAAAAAGG CCGCGTTGCT GGCGTTTTTC CATAGGCTCC GCCCCCCTGA  
 CGAGCATCAC AAAAATCGAC GCTCAAGTCA GAGGTGGCGA AACCCGACAG GACTATAAAG ATACCAGGCG  
 TTTCCCCCTG GAAGCTCCCT CGTGCCTCT CCTGTTCCGA CCCTGCCGCT TACCGGATAC CTGTCCGCT  
 TTCTCCCTTC GGAAGCGTG GCGCTTTCTC ATAGCTCAG CTGTAGGTAT CTCAGTTCGG TGTAGGTCGT  
 TCGCTCCAAG CTGGGCTGTG TGCACGAACC CCCCCTCAG CCCGACCCT GCGCCTTATC CGGTAACTAT  
 CGTCTTGAGT CCAACCCGGT AAGACACGAC TTATCGCCAC TGGCAGCAGC CACTGGTAAC AGGATTAGCA  
 GAGCGAGGTA TGTAGGCGGT GCTACAGAGT TCTTGAAGTG GTGGCCTAAC TACGGCTACA CTAGAAGAAC  
 AGTATTTGGT ATCTGCGCTC TGCTGAAGCC AGTTACCTTC GGAAAAAGAG TTGGTAGCTC TTGATCCGGC  
 AAACAAACCA CCGCTGGTAG CCGTGGTTTT TTTGTTTGCA AGCAGCAGAT TACGCGCAGA AAAAAAGGAT  
 CTCAAGAAGA TCCTTTGATC TTTTCTACGG GGTCTGACGC TCAGTGGAAC GAAAACCTAC GTTAAGGGAT  
 TTTGGTCATG AGATTATCAA AAAGGATCTT CACCTAGATC CTTTTAAATT AAAAAAGAAG TTTTAAATCA  
 ATCTAAAGTA TATATGAGTA AACTTGGTCT GACAGTTACC AATGCTTAAT CAGTGAGGCA CCTATCTCAG  
 CGATCTGTCT ATTTTCGTTCA TCCATAGTTG CCTGACTCCC CGTCGTGTAG ATAACCTACG TACGGGAGGG  
 CTTACCATCT GGCCCCAGTG CTGCAATGAT ACCGCGAGAA CCACGCTCAC CGGCTCAGA TTTATCAGCA  
 ATAAACCAGC CAGCCGGAAG GGCCGAGCGC AGAAGTGGTC CTGCAACTTT ATCCGCCTCC ATCCAGTCTA  
 TTAATTGTTG CCGGGAAGCT AGAGTAAGTA GTTCGCCAGT TAATAGTTTG CGCAACGTTG TTGCCATTGC  
 TACAGGCATC GTGGTGTAC GCTCGTCGTT TGGTATGGCT TCATTCAGCT CCGGTTCCCA ACGATC

**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\\_001165927](#), [NM\\_001321268](#), [NM\\_001321269](#), [NM\\_001330397](#), [NM\\_017777](#)

**UniProt ID:**

[Q9NXB0](#)

**Synonyms:**

BBS13; JBTS28; MES; MKS; POC12

**Summary:**

The protein encoded by this gene localizes to the basal body and is required for formation of the primary cilium in ciliated epithelial cells. Mutations in this gene result in Meckel syndrome type 1 and in Bardet-Biedl syndrome type 13. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2009]

Product images:

