

## Product datasheet for **KN202671**

### TMEM138 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:** TMEM138  
**Locus ID:** 51524  
**Components:** **KN202671G1**, TMEM138 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CCAGGCTGTAGTTACTGGTC  
**KN202671G2**, TMEM138 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GGAATTGACAAAGAGGTCAT  
**KN202671D**, 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**

```
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 AGTTTCGATGT
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 TCGCGCGTTT CGGTGATGAC
GGTAAAACC TCTGACACAT GCAGCTCCCG TTGACGGTCA CAGCTTGCTT GTAAGCGGAT GCCGGGAGCA
GACAAGCCCG TCAGGGCGCG TCAGCGGGTG TTGGCGGGTG TCGGGGCTGG CTTAACTATG CGGCATCAGA
GCAGATTGTA CTGAGAGTGC ACCATAAAAT TGTAACGTT AATATTTTGT TAAAATTCGC GTTAAATTTT
TGTTAAATCA GCTCATTTTT TAACCAATAG GCCGAAATCG GCAAAATCCC TTATAAATCA AAAGAATAGC
CCGAGATAGG GTTGAGTGTT GTTCCAGTTT GGAACAAGAG TCCACTATTA AAGAACGTGG ACTCCAACGT
CAAAGGGCGA AAAACCGTCT ATCAGGGCGA TGGCCCACTA CGTGAACCAT CACCCAAATC 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 GGCGCCATC
GCCATTCAGG CTGCGCAACT GTTGGGAAGG GCGATCGGTG CGGGCCTCTT CGCTATTACG CCAGCTGGCG
AAAGGGGAT GTGCTGCAAG GCGATTAAGT TGGGTAACGC CAGGGTTTTC CCAGTACGA CGTTGTAAAA
CGACGGCCAG TGAATTGGAG GCTACAGTCA GTGGAGAGGA CTTTCACTGA CTGACTGACT GCGTCTCAAA
```



[View online »](#)

ACCACTTACT AACGACGTGA CCTTGGACAA ATTATTTTAC CTCTCTTGGC CTCAAATTTT TCATCTGTAA  
 AATGGGGAAG GTAATAATGT ATTATGTCAT CTACCTTGTG AGGTTTAAAT AATGTTAGTG CTTGTAGAAC  
 ACTCCCTGGC ACATTGTAAG CAATGTATAA GGATTTGCTG CCATTTTTGT TACCACCGCT ACTACATGAC  
 CAGGCAGTCA TTCTTCTCAG TAATACTACT AGATTCCTTT GGTTAGAGAC AGCTCTGCAT TGAGAAGATT  
 CCAGGCATGG AGAAAAGCTG GTGAAGGTCC TAGAATAAT GACTTCTTGG GGGTTTTTGT TGTTGGTTTT  
 GTTCACTAAA GTATCCCATG CAACTGGAGT GGTACCTGGC ACACAGTAGG TCCTCAGTAA ATGTTTATGG  
 TATTAATACA TTTCTAACCT TGCTTATCTT TTTGCTCCAA CAGGTGCTTG CCTTAGAGCA AGGGAACAG  
 CTCTCATTCA AAGGAAGTAG AAGCCTCTCC CTCAGTGGTA GGGAGACAGC CAGGAGCGGT TTTCTGGGAA  
 CTGTGGGATG TGCCCTTGGG GGCCCGAGAA AACAGAAGGA AGACTAGCAT GGAGAGCGAC GAGAGCGGCC  
 TGCCCGCCAT GGAGATCGAG TGCCGCATCA CCGGCACCTT GAACGGCGTG GAGTTCGAGC TGGTGGGCGG  
 CGGAGAGGGC ACCCCCGAGC AGGGCCGCAT GACCAACAAG ATGAAGAGCA CCAAAGGCGC CCTGACCTTC  
 AGCCCTACC TGCTGAGCCA CGTGATGGGC TACGGCTTCT ACCACTTCGG CACCTACCCC AGCGGTACG  
 AGAACCCCTT CCTGCACGCC ATCAACAACG GCGGCTACAC CAACACCCGC ATCGAGAAGT ACGAGGACGG  
 CGGCGTGCTG CACGTGAGCT TCAGCTACCG CTACGAGGCC GGCCGCGTGA TCGGCGACTT CAAGGTGATG  
 GGCACCGGCT TCCCGAGGA CAGCGTGATC TTCACCGACA AGATCATCCG CAGCAACGCC ACCGTGGAGC  
 ACCTGCACCC CATGGGCGAT AACGATCTGG ATGGCAGCTT CACCCGACC TTCAGCCTGC GCGACGCGG  
 CTACTACAGC TCCGTGGTGG ACAGCCACAT GCACTTCAAG AGCGCCATCC ACCCCAGCAT CCTGCAGAAC  
 GGGGGCCCA TGTTGCGCTT CCGCCGCGTG GAGGAGGATC ACAGCAACAC CGAGCTGGG ATCGTGGAGT  
 ACCAGCACGC CTTCAAGACC CCGGATGCAG ATGCCGGTGA AGAAAGAGTT TAAGAATTCC GATCATATTC  
 AATAACCCCTT AATATAACTT CGTATAATGT ATGCTATACG AAGTTATTAG GTCTGAAGAG GAGTTTACGT  
 CCAGCCAAGC TTAGGATCTC GACCTCGAAA TTCTACCGGG TAGGGGAGGC GCTTTTCCCA AGGCAGTCTG  
 GAGCATGCGC TTTAGCAGCC CCGTGGGCA CTGGCGCTA CACAAGTGGC CTCTGGCCTC GCACACATTC  
 CACATCCACC GGTAGGCGCC AACCGACTCC GTTCTTTGGT GGCCCTTCG GCCACCTTC TACTCCTCCC  
 CTAGTCAGGA AGTTCSCCCC CGCCCGCAG CTCGCGTGTG GCAGGACGTG ACAAATGGAA GTAGCACGTC  
 TCACTAGTCT CGTGCAGATG GACAGCACCG CTGAGCAATG GAAGCGGGTA GGCCTTTGGG GCAGCGCCA  
 ATAGCAGCTT TGCTCCTTCG CTTTCTGGGC TCAGAGGCTG GGAAGGGGTG GGTCCGGGGG CGGGCTCAGG  
 GGCGGGCTCA GGGGCGGGG GGGCGCCGA AGGTCTCCG GAGGCCCGC ATTCTGCACG CTTCAAAGC  
 GCACGTCTGC CGCGCTGTTC TCCTTCTCT CATCTCCGGG CCTTTCGACC TGCATCCATC TAGATCTCGA  
 GCAGCTGAAG CTTACCATGA CCGAGTACAA GCCACGGTG CGCCTCGCCA CCCGCGACGA CGTCCCAGG  
 GCCGTACGCA CCCTCGCCG CGCGTTCCG GACTACCCG CCACGCGCCA CACCGTCGAT CCGGACCGC  
 ACATCGAGCG GGTACCGAG CTGCAAGAAC TTTCTCAC GCGCGTGGG CTCGACATCG GCAAGGTGTG  
 GGTGCGGAC GACGGCGCCG CGGTGGCGGT CTGGACCAG CCGGAGAGCG TCGAAGCGGG GCGGTGTTC  
 GCCGAGATCG GCCCGCGCAT GGCCGAGTTG AGCGGTTCC GGCTGGCCG GCAGCAACAG ATGGAAGGCC  
 TCCTGGCGCC GCACCGGCC AAGGAGCCG CGTGGTTCT GGCCACCGTC GGCGTCTCG CCGACCACCA  
 GGGCAAGGGT CTGGGACGCG CCGTCGTGCT CCCCAGGAGT GAGGCGCCG AGCGCGCCG GGTGCCCGC  
 TTCTGGAGA CCTCCGCGCC CCAACACTC CCCTTCTACG AGCGGCTCG CTTACCGTC ACCGCCGACG  
 TCGAGGTGCC CGAAGGACCG CGCACCTGGT GCATGACCCG CAAGCCCGGT GCCTGACGC CGCCCCACGA  
 CCCGACGCGC CCGACCGAAA GGAGCGCAC ACCCATGCA TCGATGATAT CAGATCCCGG GGATGCAGAA  
 ATTGATGATC TATTAACAA TAAAGATGTC CACTAAAATG GAAGTTTTT CTGTCATACT TTGTTAAGAA  
 GGGTGAGAAC AGAGTACCTA CATTTTGAAT GGAAGGATTG GAGCTACGGG GGTGGGGGTG GGTGGGATT  
 AGATAAATGC CTGCTCTTTA CTGAAGGCTC TTTACTATTG CTTTATGATA ATGTTTCATA GTTGATATC  
 ATAATTTAAA CAAGCAAAAC CAAATTAAG GCCAGCTCAT TCCTCCCACT CATGATCTAT AGATCTATAG  
 ATCTCTCGTG GGATCATTGT TTTTCTTTG ATTCCACTT TGTGGTTCTA AGTACTGTGG TTTCCAAATG  
 TGTCAGTTTC ATAGCCTGAA GAACGAGATC AGCAGCCTT GTTCCACATA CACTTCATTC TCAGTATTGT  
 TTTGCCAAGT TCTAATTCCA TCAGAAGCTG GTCGAGATCC GGAACCCTTA ATATAACTTC GTATAATGTA  
 TGCTATACGA AGTTATTAGG TCCCTCGAAG AGGTTCACTA GGCGCGCCT CTTTCATGTG GTGAGTAAG  
 GCACTCTGGA AAGCTGAACC CACGCAATTC AAAGGCCCTG ACAGTGGTGA TTTAGTGTCT TAAAGTTATT  
 AGTAGGCTGG GTACGGTGGC TCACACCCAT AATCCCAGGA CTTTGGGAA CCAAGGCAGG AGGATCTTTT  
 GAGGCTGGGA GTTTGGAGC CAGCCTAGGC AACATAGCAA GACCCTGTCT CTACCTACTA AAAATTTTTA  
 AAATTAGCTA GGATGGTGC CACACACCTG TAATCGCAGT GATTCAGGAT GCTGACGTGG AAGGATTGCT  
 TAAGCCAGG AGTTCAAGGC TACAGTGAGC CATGATCATG CCACTGCACT CCAACCAGT GACAAAGACC  
 CTATCTCAA AAAAAAAAA AAAAGCCAGG TGTGGTGGT CACGCTTGT ATCCCAAC TTTGGGAGC

CAAGGTGGGC AGATCACCTG AGGTCGGGAA TTCGGGACCA GTCTGACCAA CATGGAGAAA CCCCATCTCT  
 ACTAAAAATA CAAAAATTAG ATGGGCGTGG TGGTGCATGC CTGTAATCCC AGCTTCTTGG GAGGCTGAGG  
 CAGGAGAATC ACTTGAACAA ACAGAGACGA CTGACTGACT GACTGGAAAG AGGAAGGGCT GGAAGAGGAA  
 GGAGCTTGGC GTAATCATGG TCATAGCTGT TTCCTGTGTG AAATTGTTAT CCGCTCACAA TTCCACACAA  
 CATACGAGCC GGAAGCATAA AGTGATAAGC CTGGGGTGCC TAATGAGTGA GCTAACTCAC ATTAATTGGC  
 TTGCGCTCAC TGCCCGCTTT CCAGTCGGGA AACCTGTCTG GCCAGCTGCA TTAATGAATC GGCCAACGGC  
 CGGGGAGAGG CGGTTTGGCT ATTGGGCGCT CTTCCGCTTC CTCGCTCACT GACTCGCTGC GCTCGGTCTG  
 TCGGCTGCGG CGAGCGGTAT CAGCTCACTC AAAGGCGGTA ATACGGTTAT CCACAGAATC AGGGGATAAC  
 GCAGGAAAGA ACATGTGAGC AAAAGGCCAG CAAAAGGCCA GGAACCGTAA AAAGGCCGCG TTGCTGGCGT  
 TTTTCCATAG GCTCCGCCCC CCTGACGAGC ATCACAACAAA TCGACGCTCA AGTCAGAGGT GGCGAAACCC  
 GACAGGACTA TAAAGATACC AGGCGTTTCC CCCTGGAAGC TCCCTCGTGC GCTCTCCTGT TCCGACCCTG  
 CCGCTTACCG GATACCTGTC CGCCTTTCTC CTTTCGGGAA GCGTGGCGCT TTCTCATAGC TCACGCTGTA  
 GGTATCTCAG TTCGGTGTAG GTCGTTCCCT CCAAGCTGGG CTGTGTGCAC GAACCCCGG TTCAGCCCGA  
 CCGCTGCGCC TTATCCGGTA ACTATCGTCT TGAGTCCAAC CCGGTAAGAC ACGACTTATC GCCACTGGCA  
 GCAGCCACTG GTAACAGGAT TAGCAGAGCG AGGTATGTAG GCGGTGCTAC AGAGTCTTGG AAGTGGTGGC  
 CTAACACTAGG CTACACTAGA AGAACAGTAT TTGGTATCTG CGCTCTCTG AAGCCAGTTA CCTTCGGAAA  
 AAGAGTTGGT AGCTCTTAT CCGGCAAACA AACACCCTG GGTAGCCGTG GTTTTTTTGT TTGCAAGCAG  
 CAGATTACGC GCAGAAAAA AGGATCTCAA GAAGATCCTT TGATCTTTTC TACGGGGTCT GACGCTCAGT  
 GGAACGAAAA CTCACGTTAA GGGATTTTGG TCATGAGATT ATCAAAAAGG ATCTTACCT AGATCCTTTT  
 AAATTAATAA TGAAGTTTTA AATCAATCTA AAGTATATAT GAGTAAACTT GGTCTGACAG TTACCAATGC  
 TTAATCAGTG AGGCACCTAT CTCAGCGATC TGTCTATTTT GTTCATCCAT AGTTGCCTGA CTCCCCGTCG  
 TGTAGATAAC TACGATACGG GAGGGCTTAC CATCTGGCCC CAGTGCTGCA ATGATACCGC GAGAACCACG  
 CTCACCGGCT CCAGATTTAT CAGCAATAAA CCAGCCAGCC GGAAGGGCCG AGCGCAGAAG TGGTCCTGCA  
 ACTTTATCCG CCTCCATCCA GTCTATTAAT TGTTGCCGGG AAGCTAGAGT AAGTAGTTTC CCAGTTAATA  
 GTTTGCGCAA CGTTGTTGCC ATTGCTACAG GCATCGTGGT GTCACGCTCG TCGTTTGTA TGGCTTCATT  
 CAGCTCCGGT TCCCAACGAT C

**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\\_001330281](#), [NM\\_016464](#), [NR\\_028473](#)

**UniProt ID:**

[Q9NPIO](#)

**Synonyms:**

HSPC196

**Summary:**

This gene encodes a multi-pass transmembrane protein. Reduced expression of this gene in mouse fibroblasts causes short cilia and failure of ciliogenesis. Expression of this gene is tightly coordinated with expression of the neighboring gene TMEM216. Mutations in this gene are associated with the autosomal recessive neurodevelopmental disorder Joubert Syndrome. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2012]

Product images:

