

## Product datasheet for **KN224711**

### NOTCH3 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:	NOTCH3
Locus ID:	4854
Components:	<p><b>KN224711G1</b>, NOTCH3 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GTGGCGGCGACATCGGGCGA</p> <p><b>KN224711G2</b>, NOTCH3 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GGACCTGGCGGATGGGACGA</p> <p><b>KN224711D</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**

```
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 ACTGTCAAGC 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 TCAAGAAGTCT TGTAGCACCG CCTACATACC TCGCTCTGCT
AATCCTGTTA CCAGTGGCTG CTGCCAGTGG CGATAAGTCG TGTCTTACCG GGTGGACTC AAGACGATAG
TTACCGGATA AGGCGCAGCG GTCGGGCTGA ACGGGGGGTT CGTGACACACA GCCCAGCTTG GAGCGAACGA
CCTACACCGA ACTGAGATAC CTACAGCGTG AGCTATGAGA AAGCGCCACG CTTCGCGAAG GGAGAAAGGC
GGACAGGTAT CCGGTAAGCG GCAGGGTCCG AACAGGAGAG CGCACGAGGG AGCTTCCAGG GGGAAACGCC
TGGTATCTTT ATAGTCCTGT CGGGTTTCGC CACCTCTGAC TTGAGCGTCG ATTTTTGTGA TGCTCGTCAG
GGGGGCGGAG CCTATGGAAA AACGCCAGCA ACGCGGCCTT TTTACGGTTC CTGGCCTTTT GCTGGCCTTT
TGCTCACATG TTCTTTCCTG 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 »](#)

ACCTTCCAAC TCTTGACCTC AAGTGATCCA TCCACCTCTG CCTCTCAAAG TGCTGGGATT ACAGGCCGGA  
 GCCACCGCGC CCGGTCCGAC TTTTAGGTTT GTGAATGTTT TAGATCAGAG TCCTGGGGAA GCTTGGTGCA  
 TGGGCTTGA TTTGTGCGTC CGTGGCTGTG GGTCCATGAG CCTCTCAGGA CGTGACTGGC CTCAGTTTCC  
 AGAGTTTCTG GGAGGCTGTG TTTTTGTCC CGGCTCCAGA GGTGTCCGGC TCTGGGTGTG TACTGGGGGA  
 TGGGATGGG GTGCGTGGGC GTTCACGAGG TTGGGTGTG CCGCCACTCC GGGTCTGCC CGCGTCTAC  
 TGCATGCTCG GCCTGGTTT CCGAGGGTCC GCGCGTCCCA GGCTGTGCGG GTGGAGGTTG GGCAGGGACC  
 CCGGGAGGCC GGGCGGGGG CGGGGCGCG CTGGCCGGC CCGGGGGCGG GGCAGCCTT CGAGGGCTGG  
 GGGCGGGGCG GCCCGGCCG CTACTTCGG CGAAGTTGGC GGCGCGGAGG CTGGCCCGGG ACGCGCCCGG  
 AGCCAGGGA AGGAGGGAGG AGGGGAGGGT CGCGGCCGGC CGCCACTAGC ATGGAGAGCG ACGAGAGCGG  
 CCTGCCCGCC ATGGAGATCG AGTGCCGCAT CACCGGCACC CTGAACGGCG TGGAGTTCGA GCTGGTGGG  
 GCGGAGAGG GCACCCCGA GCAGGGCCG ATGACCAACA AGATGAAGAG CACCAAAGC GCCCTGACCT  
 TCAGCCCTA CTTGCTGAGC CACGTGATGG GCTACGGCTT CTACCACTTC GGCACCTACC CCAGCGGCTA  
 CGAGAACCC TTCCTGCACG CCATCAACAA CGGCGGTAC ACCAACACCC GCATCGAGAA GTACGAGGAC  
 GGGCGGTGC TGCACGTGAG CTTACGCTAC CGCTACGAGG CCGGCCGCGT GATCGGCGAC TTCAAGGTGA  
 TGGCACCGG CTTCCCGAG GACAGCGTGA TCTTACCGA CAAGATCATC CGCAGCAACG CCACCGTGA  
 GCACCTGCAC CCCATGGCG ATAACGATCT GGATGGCAGC TTCACCCGCA CCTTCAGCCT GCGCGACGGC  
 GGTACTACA GCTCCGTGGT GGACAGCCAC ATGCACTTCA AGAGCGCCAT CCACCCAGC ATCCTGCAGA  
 ACGGGGGCC CATGTTCCG TCCCGCCGCG TGGAGGAGGA TCACAGCAAC ACCGAGCTGG GCATCGTGA  
 GTACCAGCAC GCCTTCAAGA CCCCGGATGC AGATGCCGT GAAGAAAGAG TTTAAGAATT CCGATCATAT  
 TCAATAACCC TTAATATAAC TTCGTATAAT GTATGCTATA CGAAGTTATT AGGTCTGAAG AGGAGTTTAC  
 GTCCAGCAA GCTTAGGATC TCGACCTCGA AATTCTACCG GGTAGGGGAG GCGCTTTTCC CAAGGCAGTC  
 TGGAGCATGC GCTTAGCAG CCCCGTGGG CACTTGGCGC TACACAAGTG GCCTCTGGC TCGCACACAT  
 TCCACATCCA CCGTAGGCG CCAACCGACT CGTTCCTTTG GTGGCCCTT CCGCCACCT TCTACTCTC  
 CCCTAGTCAG GAAGTTCCC CCCGCCCGC AGCTCGGTC GTGCAGGAC TGACAAATG AAGTAGCACG  
 TCTCACTAGT CTCGTGCAGA TGGACAGCAC CGCTGAGCAA TGGAAAGCGG TAGGCCTTTG GGGCAGCGG  
 CAATAGCAGC TTTGCTCCTT CGCTTTCTGG GCTCAGAGG TGGGAAGGGG TGGTCCGGG GGGGGCTCA  
 GGGGGGGCT CAGGGGCGGG GCGGGCGCCC GAAGTCTC CGGAGGCCG GCATTCTGA CGCTTCAAAA  
 GCGCAGTCT GCCGCGTGT TCTCCTTTC CTCATCTCCG GGCTTTTGA CCTGCATCCA TCTAGATCTC  
 GAGCAGTGA AGCTTACCAT GACCGAGTAC AAGCCCACGG TGGCCTCGC CACCCGCGAC GACGTCCCA  
 GGGCGTACG CACCCTCGC GCCGCTTCC CCGACTACC CGCCACGCG CACACCGTCG ATCCGGACCG  
 CCACATCGAG CGGTCCCG AGCTGCAAGA ACTTCTCTC ACGCGCTCG GGCTCGACAT CGGCAAGGTG  
 TGGTCCGGG ACGACGGCG CCGGTGGCG GTCTGGACCA CGCCGGAGAG CGTCGAAGCG GGGCGGTGT  
 TCGCCGAGT CGGCCGCGC ATGGCCGAGT TGAGCGTTC CCGGCTGGC GCGCAGCAAC AGATGGAAGG  
 CCTCTGGCG CGCACCGGC CCAAGGAGCC CGCGTGGTTC CTGGCCACC TCGGCGTCTC GCCCGACCAC  
 CAGGGCAAGG GTCTGGGCG CGCCGTCGTG CTCCCGGAG TGGAGGCGG CGAGCGCGC GGGGTGCCG  
 CCTTCTGGA GACCTCCGCG CCCACAACC TCCCCTTCTA CGAGCGGCTC GGCTTACC GTCACCCCGA  
 CGTCGAGGTG CCCGAAGGAC CGCGCACCTG GTGCATGACC CGCAAGCCG GTGCCTGACG CCCGCCAC  
 GACCCGACG GCCCGACCGA AAGGAGCGCA CGACCCATG CATCGATGAT ATCAGATCCC CGGGATGCAG  
 AAATTGATGA TCTATTAAC AATAAAGATG TCCATAAAA TGGAAATTTT TCCTGCATA CTTTGTAAAG  
 AAGGTGAGA ACAGAGTACC TACATTTTGA ATGGAAGGAT TGGAGTACG GGGGTGGGG TGGGTGGGA  
 TTAGATAAAT GCCTGCTCTT TACTGAAGGC TCTTACTAT TGCTTTATGA TAATGTTTCA TAGTTGATA  
 TCATAATTA AACAAGCAA ACCAAATTAA GGGCCAGCTC ATTCCTCCA CTCATGATCT ATAGATCTAT  
 AGATCTCTCG TGGATCATT GTTTTTCTCT TGATTCCAC TTTGTGGTTC TAAGTACTGT GGTTCACAA  
 TGTGTCAGTT TCATAGCCTG AAGAACGAGA TCAGCAGCCT CTGTTCCACA TACACTTCAT TCTCAGTATT  
 GTTTTCCAA GTTCTAATC CATCAGAAGC TGGTCGAGAT CCGGAACCCT TAATATAACT TCGTATAATG  
 TATGCTATAC GAAGTTATTA GGTCCCTCGA AGAGTTTAC TAGGCGCGC TGGCGGGGT TCATGGGAGG  
 CAGGAACCAG GGTGGGGAA GGGGCGCAGG AGCCCGGGC TTCATGCCAG TCCTGGAGGA CCCAGAGATT  
 CAGAATGGG AGGACCCAG AGGCCAAGG AACAGGGACC CTTGAGCGAT TAGAGCTGAA GATGAAGGGA  
 CCCAGGATC CGAGACTGGG AGCTCGAGGT GCGGGGATCA GGGACTCGAG GTGGGGGGT GCGTACAGAG  
 TTCGGGACTC GTCCCATCC AACTCACGCC TGGAGTCTG GGTAGTTAT GATTGGGGG CCAGGTAATT  
 CTAGGCCGGG GACCTCTCGC ACAAAGCCC CCCACCCCG CCCCAGCAC CCCGGGCGG CTGGGCCAGG  
 CGGGGGTGG GGAGGGGGC CGAAGTTCTG GGAGCTCTGA ACTCGGAGAA AACTTCCAG GCCGCGCGC

```

AGCAAGACCC GGAGCCGGAT TCCGAGCCGG AGCCTCGGCG GCGCGCGCGC CCCCTCCCC GCCCGCAGCC
CGCCTCTCTC CTCTGGCCCG GGGGACCCGG AGGCCCTGGG ACCCCGCCCC TGCGCGGGGA GGGGAAGGGG
CGAGGGCCCA CGTGCTCCCC TCCACAGTCT TCACTGACTG ACTGACTGGA AAGTCCTCTC CACTGACTGT
AGCCTCCAAT TCACTGGCCG TCGTTTTACA ACGTCGTGAC TGGGAAAACC CTGGCGTTAC CCAACTTAAT
CGCCTTGAG CACATCCCC TTTGCCCAGC TGGCGTAATA GCGAAGAGGC CCGCACCGAT CGCCCTTCCC
AACAGTTGCG CAGCCTGAAT GCGGAATGGC GCCTGATGCG GTATTTTCTC CTTACGCATC TGTGCGGTAT
TTCACACCGC ATACGTCAA GCAACCATAG TACGCGCCCT GTAGCGGCGC ATTAAGCGCG GCGGGTGTGG
TGTTTACGCG CAGCGTGACC GCTACACTTG CCAGCGCCCT AGCGCCCGCT CCTTTCGCTT TCTTCCCTTC
CTTTCTCGCC ACGTTCGCG GCTTTCGCCG TCAAGCTCTA AATCGGGGGC TCCCTTTAGG GTTCCGATTT
AGTGCTTTAC GGCACCTCGA CCCCAGAAAA CTTGATTTGG GTGATGGTTC ACGTAGTGGG CCATCGCCCT
GATAGACGGT TTTTGGCCCT TTGACGTTGG AGTCCACGTT CTTAATAGT GGACTCTTGT TCCAAACTGG
AACAACTC AACCTATCT CGGGCTATTC TTTTGATTTA TAAGGGATTT TGCCGATTTT GGCCTATTGG
TTAAAAATG AGCTGATTTA AAAAAATTT AACGCGAATT TTAACAAAAT ATTAACGTTT ACAATTTTAT
GGTGCCTCT CAGTACAATC TGCTCTGATG CCGCATAGTT AAGCCAGCCC CGACACCCGC CAACACCCGC
TGACGCGCCC TGACGGGCTT GTCTGCTCCC GGCATCCGCT TACAGACAAG CTGTGACCGT CAACGGGAGC
TGATGTGTC AGAGGTTTTT ACCGTCATCA CCGAAACGCG CGACCCGAAA GGGCCTCGTG ATACGCCTAT
TTTTATAGGT TAATGTCATG ATAATAATGG TTTCTTAGAC GTCAGGTGGC ACTTTTCGGG GAAATGTGCG
CGGAACCCCT ATTTGTTTAT TTTTCTAAT ACATTCAAAT ATGTATCCGC TCATGAGACA ATAACCCTGA
TAAATGCTTC AATAATATTG AAAAAGGAAG AGTATGAGTA TTCAACATTT CCGTGTCCGC CTTATTCCTT
TTTTTGCGGC ATTTTGCCTT CCTGTTTTTG CTCACCCAGA AACGCTGGTG AAAGTAAAG ATGCTGAAGA
TCAGTTGGGT GCACGAGTGG GTTACATCGA ACTGGATCTC AACAGCGGTA AGATCCTTGA GAGTTTTTCG
CCGAAGAAC GTTTTCCAAT GATGAGCACT TTTAAAGTTC TGCTATGTGG CGCGGTATTA TCCCGTATTG
ACGCCGGGCA AGAGCAACTC GGTCGCCGCA TACACTATTC TCAGAAATGAC TTGTTGAGT ACTCACCAGT
CACAGAAAAG CATCTTACGG ATGGCATGAC AGTAAGAGAA TTATGCAGTG CTGCCATAAC CATGAGTGAT
AACACTGCGG CCAACTTACT TCTGACAACG ATCGGAGGAC CGAAGGAGCT AACCGCTTTT TTGCACAACA
TGGGGGATCA TGTAACCTCG CTT

```

**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\\_000435](#)

**UniProt ID:**

[Q9UM47](#)

**Synonyms:**

CADASIL; CADASIL1; CASIL; IMF2; LMNS

**Summary:**

This gene encodes the third discovered human homologue of the *Drosophila melanogaster* type I membrane protein notch. In *Drosophila*, notch interaction with its cell-bound ligands (delta, serrate) establishes an intercellular signalling pathway that plays a key role in neural development. Homologues of the notch-ligands have also been identified in human, but precise interactions between these ligands and the human notch homologues remains to be determined. Mutations in NOTCH3 have been identified as the underlying cause of cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL). [provided by RefSeq, Jul 2008]

Product images:

