

Product datasheet for **KN311125**

Notch2 Mouse 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: Notch2
Locus ID: 18129
Components: **KN311125G1**, Notch2 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CCCGGTACTCACCGTGCGCG
KN311125G2, Notch2 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CTCTCTGTCTCTGCGCTACG
KN311125D, 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 AGTTCGATGT
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 CCCTTTCGGG TCGCGGTTT CGGTGATGAC
GGTAAAACC TCTGACACAT GCAGCTCCG TTGACGGTCA 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
GGGTCGAGGT 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 CGCTATTACG CCAGCTGGCG
AAAGGGGAT GTGCTGCAAG GCGATTAAGT TGGTAACGC CAGGGTTTTC CCAGTACGA CGTTGTAATA
CGACGGCCAG TGAATTGGAG GCTACAGTCA GTGGAGAGGA CTTTCACAGG CTGTCCGCCG TGCTCATTTG
```



[View online »](#)

ATAACTGCC GTTATTCATG CGACACTGAA TGAACGAAAT GCCCAGAGCA TCTTAAGGAA TGTCTCTTA
 AGAGTACTTT GGCGCCTTTG CCCTCTGCCT TCCGTTGACA GTCTCGTTTT TGCTCTCCCT CATTCTCTA
 ACCAGCCAAG AAGTGTGTGG GTGGGTGTGT GGGGCATGAG GTCTGCCTCT CTCTACAAGT TCAGGACCCG
 GGTAAACCCT AGTGTTTGAT GTTGGGCGCT TCAGCCGCC CCCTTTCCGA GCTCATGGGC GGGCTCGGCG
 GTCGAGCGGG CGGAGTACGG GGTGCTGCTC ACTCAGATCC CTCCGCGCGC AGAGGACCGG CGTTCTTTT
 TGGGGAAAC CCCTGGGCGC GCGGCGGCGA CGGGGCGGGA GCCTCGCGGT GGGAGGAGGC CGAGGCGGAA
 GGACACGCGG GCCGCCAGC CGCGCGGCGC AGCCAGAAAC TTTCAGCCAA ACTTCGGGCG GCGGCCTGGC
 TGC GCGGAGT GCAGGGGCGG CGCAGCGGGA GCTCCAGGAC TCAGCGAGCC GCGGGGCGAG GGTAGAGCAC
 GCGAGAGCCG GGCTCCTGGT CCGGACCCGC TCCCATGCG GATCTGCTCT GGCTGCGGCC CCGAAGACTA
 GCATGGAGAG CGACGAGAGC GGCCTGCCG CCATGGAGAT CGAGTGCCGC ATCACC GGCA CCCTGAACGG
 CGTGGAGTTC GAGCTGGTGG GCGGCGGAGA GGGCACCCCG GAGCAGGGCC GCATGACCAA CAAGATGAAG
 AGCACCAAAG GCGCCCTGAC CTTAGCCCG TACCTGCTGA GCCACGTGAT GGGCTACGGC TTCTACCACT
 TCGGCACCTA CCCCAGCGGC TACGAGAACC CCTTCTGCA CGCCATCAAC AACGGCGGCT ACACCAACAC
 CCGCATCGAG AAGTACGAGG ACGGCGGCGT GCTGCACGTG AGCTTCAGCT ACCGCTACGA GGCCGGCCGC
 GTGATCGGCG ACTTCAAGGT GATGGGCACC GGCTTCCCG AGGACAGCGT GATCTTACC GACAAGATCA
 TCCGACGCAA CGCCACCCTG GAGCACCTGC ACCCATGGG CGATAACGAT CTGGATGGCA GCTTACCCCG
 CACCTTACG CTGCGCGAGC GCGGCTACTA CAGCTCCGTG GTGGACAGCC ACATGCACCT CAAGAGCGCC
 ATCCACCCCA GCATCCTGCA GAACGGGGG CCCATGTTCC CTTTCCGCG CGTGGAGGAG GATCACAGCA
 ACACCGAGCT GGCATCGTG GAGTACCAGC ACGCCTTCAA GACCCCGGAT GCAGATGCCG GTGAAGAAAG
 AGTTTAAGAA TTCCGATCAT ATTCAATAAC CCTTAATATA ACTTCTGATA ATGTATGCTA TACGAAGTTA
 TTAGGTCTGA AGAGGAGTTT ACGTCCAGCC AAGCTTAGGA TCTCGACCTC GAAATTCTAC CGGGTAGGGG
 AGCGCTTTT CCAAGGCAG TCTGGAGCAT GCGCTTAGC AGCCCGCTG GGCACCTGGC GCTACACAAG
 TGGCCTGCG CCTCGCACAC ATTCCACATC CACCGTAGG CGCCAACCGA CTCCTTCTT TGGTGGCCCG
 TTCGCGCCAC CTTCTACTCC TCCCTAGTC AGGAAGTTCC CCCC CGCCG CACAGCTCGC TCGTGCAGGA
 CGTGACAAAT GGAAGTAGCA CGTCTACTA GTCTCGTCA GATGGACAGC ACCGCTGAGC AATGGAAGCG
 GGTAGGCCTT TGGGCGAGCG GCCAATAGCA GCTTTGCTCC TTCGCTTTCT GGGCTCAGAG GCTGGGAAGG
 GGTGGGTCCG GGGGCGGGCT CAGGGGCGGG CTCAGGGGCG GGGCGGGCG CCGAAGGTCC TCCGGAGGCC
 CGGCATTCTG CACGCTTCAA AAGCGCACGT CTGCCGCGT GTTCTCTCT TCCTCATCTC CGGGCCTTTC
 GACCTGCATC CATCTAGATC TCGAGCAGCT GAAGCTTACC ATGACCGAGT ACAAGCCAC GGTGCGCCTC
 GCCACCCGCG ACGACGTCCC CAGGGCCGTA CGCACCTCG CCGCCGCGT CGCCGACTAC CCCGCCACGC
 GCCACACCGT CGATCCGGAC CGCCACATCG AGCGGGTAC CGAGCTCAA GAACTTTC TCACGCGCGT
 CGGGCTCGAC ATCGGCAAGG TGTGGGTGCG GGACGAGCG GCGCGGTGG CGGTCTGGAC CACGCCGGAG
 AGCGTCGAAG CGGGGCGGT GTTCGCGGAG ATCGGCCCG GCATGGCCGA GTTGAGCGGT TCCCGGCTGG
 CCGCGCAGCA ACAGATGGAA GGCCTCCTGG CGCCGACCG GCCCAAGGAG CCCGCGTGGT TCCTGGCCAC
 CGTCGGCGTC TCGCCGACC ACCAGGGCAA GGGTCTGGG AGCGCCGTCG TGCTCCCGG AGTGGAGGCG
 GCCGAGCGCG CCGGGGTGCC CGCCTTCTG GAGACCTCC CGCCCCACA CCTCCCTTC TACGAGCGGC
 TCGGCTTAC CGTACCGCC GACGTCGAGG TGCCGAAGG ACCGCGCACC TGGTGCATGA CCCGCAAGCC
 CGGTGCAGTA CGCCGCCCC ACGACCCGCA GCGCCGACC GAAAGGAGCG CACGACCCCA TGCATCGATG
 ATATCAGATC CCCGGGATGC AGAAATTGAT GATCTATTAA ACAATAAAGA TGTCCACTAA AATGGAAGTT
 TTTCTGTCA TACTTTGTTA AGAAGGGTGA GAACAGAGTA CCTACATTTT GAATGGAAGG ATTGGAGCTA
 CGGGGGTGGG GGTGGGGTGG GATTAGATAA ATGCCTGCTC TTTACTGAAG GCTCTTACT ATTGCTTTAT
 GATAATGTTT CATAGTTGGA TATCATAATT TAAACAAGCA AAACCAAATT AAGGGCCAGC TCATTCTCC
 CACTCATGAT CTATAGATCT ATAGATCTCT CGTGGGATCA TTGTTTTTCT CTTGATTCCC ACTTTGTGGT
 TCTAAGTACT GTGGTTTCCA AATGTGTCAG TTTCATAGCC TGAAGAACGA GATCAGCAGC CTCTGTCCA
 CATACTTCT ATTCTCAGTA TTGTTTTGCC AAGTTCTAAT TCCATCAGAA GCTGGTCGAG ATCCGGAACC
 CTTAATATAA CTTCTGATAA TGTATGCTAT ACGAAGTTAT TAGTCCCTC GAAGAGGTTT ACTAGGCGCG
 CCTGCGTCTT CCAAAGTCC TCGTCCGGG CTCGAGTCTT GGCAACGCGT AGCGTCCCG GTTCCGCGTT
 AGCGGGGTCT CGGGCGAGCA GCTCGCGGG CGAGGTGCGA GTGTGGTCCG GAGGGCGGCG GGGGCTTGGC
 GCGTTCCAG CTTTTGACAC CCGGATCGGT CGGTTTGTCC GGAGGAGGAG TTGGGCGTGG GGCTTAGGTC
 TTGGATAGGT GGAGGCAGCA GTGGGGGAA TGGTGTGGCA GCGTGCTGAG CCACATGATT GAAAATCTCA
 ACTGCTGTTA TTCTTTCCGA GGCGCGGAGC TCTGCTGCGG TTCCAGTGTG CGTCCAGCCC CAGGAATGTG
 GTGTGACGAT CCCCACTCC TCCAACCTGG CAGCAGCTTG CTGCTCTTTT GGCACCGTTG GGGGTGGGCG

```

AGGGGCAGGC GAGGAAAAGT GGAGACGTTG CTTGATCCGA AGTGCTTGCT TAGAAAGGCT TGTTATGGTG
GGATATTCGG TGCCCCCTCG CTAACCTGGT GGGAGCCAGG AAAGGAAATC GGATCATATT TTACCCACTC
CACCCACATC TTTAGATTTT ACATTTCTTT GGAATGTTGT ATTCACCTCT GCCGGTTGGA CTTTAGATCA
GAAGGGATCT TGCTGCCGCC CGAAAGAGGA AGGGCTGGAA GAGGAAGGAG CTTGGCGTAA TCATGGTCAT
AGCTGTTTCC TGTGTGAAAT TGTTATCCGC TCACAATTCC ACACAACATA CGAGCCGGAA GCATAAAGTG
TAAAGCCTGG GGTGCCTAAT GAGTGAGCTA ACTCACATTA ATTGCGTTGC GCTCACTGCC CGCTTTCCAG
TCGGGAAACC TGTCGTGCCA GCTGCATTAA TGAATCGGCC AACGCGCGGG GAGAGCGGGT TTGCGTATTG
GGCGCTTTC CGCTTCCTCG CTCACTGACT CGCTGCGCTC GGTCGTTCCG CTGCGGCGAG CGGTATCAGC
TCACTCAAAG GCGGTAATAC GGTATCCAC AGAATCAGGG GATAACGCAG GAAAGAACAT GTGAGCAAAA
GGCCAGCAAA AGGCCAGGAA CCGTAAAAG GCCGCGTTGC TGGCGTTTTT CCATAGGCTC CGCCCCCTG
ACGAGCATCA CAAAAATCGA CGCTCAAGTC AGAGGTGGCG AAACCCGACA GGACTATAAA GATACCAGGC
GTTTCCCCCT GGAAGCTCCC TCGTGCCTC TCCTGTTCG ACCCTGCCG TTACCGGATA CCTGTCCGCC
TTTCTCCCTT CGGAAGCGT GGCCTTTCT CATAGCTCAC GCTGTAGGTA TCTCAGTTCG GTGTAGGTCG
TTCGCTCAA GCTGGGCTGT GTGCACGAAC CCCCCTTCA GCCCGACCG TGCGCTTAT CCGGTAACTA
TCGCTTTGAG TCCAACCCGG TAAGACACGA CTTATCGCCA CTGGCAGCAG CCACTGGTAA CAGGATTAGC
AGAGCGAGGT ATGTAGGCGG TGCTACAGAG TTCTTGAAGT GGTGGCCTAA CTACGGCTAC ACTAGAAGAA
CAGTATTTGG TATCTGCGCT CTGCTGAAGC CAGTTACCTT CGGAAAAAGA GTTGGTAGCT CTTGATCCGG
CAAACAAACC ACCGCTGGTA GCGGTGGTTT TTTTGTTCG AAGCAGCAGA TTACGCGCAG AAAAAAGGA
TCTCAAGAAG ATCCTTTGAT CTTTTCTACG GGGTCTGACG CTCAGTGGAA CGAAACTCA CGTTAAGGGA
TTTTGGTCAT GAGATTATCA AAAAGGATCT TCACCTAGAT CCTTTTAAAT TAAAAATGAA GTTTTAAATC
AATCTAAAGT ATATATGAGT AAACCTGGTC TGACAGTTAC CAATGCTTAA TCAGTGAGGC ACCTATCTCA
CGCATCTGTC TATTTCTGTC ATCCATAGTT GCCTGACTCC CCGTCGTGTA GATAACTACG ATACGGGAGG
GCTTACCATC TGGCCCCAGT GCTGCAATGA TACCAGGAGA ACCACGCTCA CCGGCTCCAG ATTTATCAGC
AATAAACCCAG CCAGCCCGAA GGGCCGAGCG CAGAAGTGGT CTGCAACTT TATCCGCTC CATCCAGTCT
ATTAATTGTT GCCGGAAGC TAGAGTAAGT AGTTCGCCAG TTAATAGTTT GCGCAACGTT GTTGCCATTG
CTACAGGCAT CGTGGTGTCA CGCTCGCTG TTGGTATGGC TTCATTACGC TCCGGTTCCC AACGATC

```

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_010928](#)

UniProt ID:

[O35516](#)

Synonyms:

AI853703; N2

Summary:

Functions as a receptor for membrane-bound ligands Jagged-1 (JAG1), Jagged-2 (JAG2) and Delta-1 (DLL1) to regulate cell-fate determination (PubMed:10393120). Upon ligand activation through the released notch intracellular domain (NICD) it forms a transcriptional activator complex with RBPJ/RBPSUH and activates genes of the enhancer of split locus (PubMed:10393120, PubMed:18710934). Affects the implementation of differentiation, proliferation and apoptotic programs (PubMed:10393120, PubMed:18710934). May play an essential role in postimplantation development, probably in some aspect of cell specification and/or differentiation (By similarity). In collaboration with RELA/p65 enhances NFATc1 promoter activity and positively regulates RANKL-induced osteoclast differentiation (PubMed:18710934). Positively regulates self-renewal of liver cancer cells (By similarity). [UniProtKB/Swiss-Prot Function]

