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# Product datasheet for RC402035

## NOTCH3 (NM_000435) Human Mutant ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Mutant ORF Clones |
| **Product Name:** | NOTCH3 (NM_000435) Human Mutant ORF Clone |
| **Mutation Description:** | C49F |
| **Affected Codon#:** | 49 |
| **Affected NT#:** | 146 |
| **Nucleotide Mutation:** | NOTCH3 Mutant (C49F), Myc-DDK-tagged ORF clone of Homo sapiens notch 3 (NOTCH3) as transfection-ready DNA |
| **Effect:** | CADASIL |
| **Symbol:** | NOTCH3 |
| **Synonyms:** | CADASIL; CADASIL1; CASIL; IMF2; LMNS |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **Tag:** | Myc-DDK |
| **ACCN:** | NM_000435 |
| **ORF Size:** | 6963 bp |
| **Restriction Sites:** | SgfI-MluI |

**ORF Nucleotide Sequence:**

>RC402035 representing NM_000435
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGGCCGGGGGCCCGTGGCCGCCGCCGCCGCCGTCGCCCGATGTCGCCGCCACCGCCACCGCCACCCG
TGCGGGCGCTGCCCCTGCTGCTGCTGCTAGCGGGGCCGGGGGCTGCAGCCCCCCCTTGCCTGGACGGAAG
CCCGTTTGCAAATGGAGGTCGTTGCACCCAGCTGCCCTCCCGGGAGGCTGCCTGCCTGTGCCCGCCTGGC
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CGCTTCCTCTGCTCCTGCCCACCTGGCTACCAGGGCCGCAGCTGCCGAAGCGACGTGGATGAGTGCCGGG

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TGGGTGAGCCCTGCCGCCATGGTGGCACCTGCCTCAACACACCTGGCTCCTTCCGCTGCCAGTGTCCAGC
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AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:**

>RC402035 representing NM_000435
Red=Cloning site Green=Tags(s)

MGPGARGRRRRRPMSPPPPPPPVRALPLLLLLAGPGAAAPPCLDGSPFANGGRCTQLPSREAACLCPPG
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RFLCSCPPGYQGRSCRSDVDECRVGEPCRHGGTCLNTPGSFRCQCPAGYTGPLCENPAVPCAPSPCRNGG
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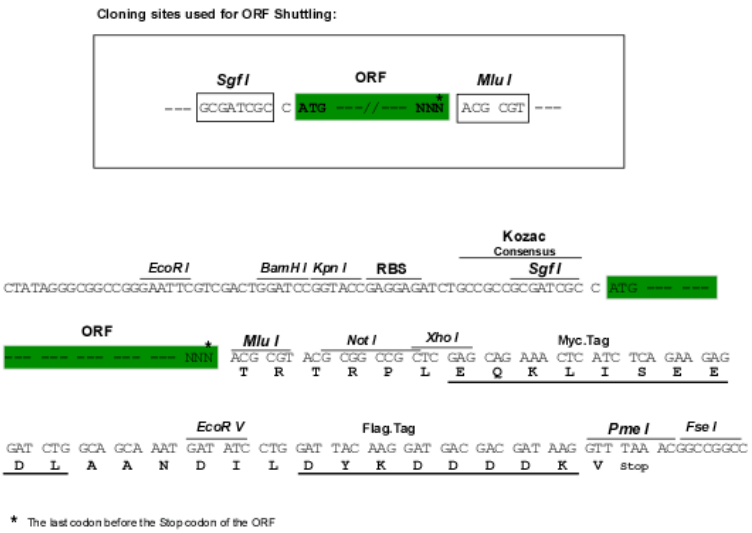
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**RefSeq:** NP_000426

**RefSeq Size:** 6963 bp

**RefSeq ORF:** 6966 bp

**Locus ID:** 4854

**Cytogenetics:** 19p13.12

**Domains:** NL, EGF_CA, ANK, EGF, EGF

**Protein Families:** Druggable Genome

**Protein Pathways:** Dorso-ventral axis formation, Notch signaling pathway

**MW:** 255.3 kDa

**Gene Summary:** This gene encodes the third discovered human homologue of the Drosophilia melanogaster type I membrane protein notch. In Drosophilia, 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]