

Product datasheet for **RC402177**

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:	C1015R
Affected Codon#:	1015
Affected NT#:	3043
Nucleotide Mutation:	NOTCH3 Mutant (C1015R), 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:	>RC402177 representing NM_000435 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCCGGGGCCCGTGGCCGCCGCCCGCCGTCGCCGATGTCGCCGCCACCGCCACCGCCACCCG
TGCGGGCGCTGCCCTGCTGCTGCTGCTAGCGGGCCGGGGGCTGCAGCCCCCTTGCCTGGACGGAAG
CCCGTGTGCAAAATGGAGGTCGTTGCACCCAGCTGCCCTCCCGGGAGGCTGCCTGCCTGTGCCCGCTGGC
TGGGTGGGTGAGCGGTGTCAGCTGGAGGACCCCTGCTCACTCAGGCCCTGTGCTGGCCGTGGTGTCTGCC
AGAGTTCAGTGGTGGCTGGCACCGCCGATTCTCATGCCGTTGCCCGTGGCTCCGAGGCCCTGACTG
CTCCCTGCCAGATCCCTGCCTCAGCAGCCCTTGTGCCACGGTGCCCGCTGCTCAGTGGGGCCCGATGGA
CGTTCCTCTGCTCCTGCCACCTGGTACCAGGGCCGACGCTGCCGAAGCGACGTGGATGAGTGCCGGG



[View online »](#)

TGGGTGAGCCCTGCCGCCATGGTGGCACCTGCCTCAACACACCTGGCTCCTCCGCTGCCAGTGTCCAGC
TGGCTACACAGGGCCACTATGTGAGAACCCCGCGGTGCCCTGTGCACCCTCACCATGCCGTAACGGGGGC
ACCTGCAGGCAGAGTGGCGACCTCACTTACGACTGTGCCTGTCTTCTGGGTTTGGGGTTCAGAAATTGTG
AAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAATGGGGGACATGCGTGGATGGCGTCAACAC
CTAACTGCCAGTGCCTCCTGAGTGGACAGGCCAGTTCGCACGGAGGACGTGGATGAGTGTGAGTGTG
CAGCCCAACGCCTGCCACAATGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGCTGCGTGTGTGTCA
ATGGCTGGACAGGCGAGAGCTGCAGTCAGAATATCGATGACTGTGCCACAGCCGTGCTTCCATGGGGC
CACCTGCCATGACCGCGTGGCTTCTTTCTACTGTGCCTGCCCATGGGCAAGACTGGCCTCCTGTGTAC
CTGGATGACGCCTGTGTGAGCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGCC
GGGCCATTTGCACCTGTCTCCCGGCTTACGGGTGGGGCATGTGACCAGGATGTGGACGAGTGTCTAT
CGGCGCAACCCCTGCGAGCACTTGGGCAGGTGCGTGAACACGCAGGGCTCCTTCTGTGCCAGTGTGCGT
CGTGGCTACACTGGACCTCGCTGTGAGACCGATGTCAACGAGTGTCTGTGCGGGCCCTGCCGAAACAGG
CCACGTGCCTCGACCGCATAGGCCAGTTCACCTGTATCTGTATGGCAGGCTTACAGGAACCTATTGCGA
GGTGGACATTGACGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
TTCAGTGCACCTGCCCTCGGGCTTACAGCGCTCCACGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
CGCCCTGCAGGAATGGCGCAAAATGCGTGGACAGCCCGATGGCTACGAGTGGCCCTGTGCCGAGGGCTT
TGAGGGCACGCTGTGTGATCGCAACGTGGACGACTGCTCCCTGACCCATGCCACCATGGTGTGCGTGTG
GATGGCATCGCCAGCTTCTCATGTGCTGTGCTCCTGGCTACACGGGCACACGCTGCGAGAGCCAGGTGG
ACGAATGCCGACAGCCAGCCCTGCCGCCATGGCGGCAAAATGCCTAGACCTGGTGGACAAGTACCTGTGCC
CTGCCCTTCTGGGACCACAGGTGTGAATGCGAAGTGAACATTGACGACTGTGCCAGCAACCCCTGCACC
TTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCTGGCTTACAGGGCCCTTT
GTAACGTGGAGATCAATGAGTGTGCTTCCAGCCATGCGGCGAGGGAGGTTCTGTGTGGATGGGAAAA
TGGCTCCGCTGCCTTGCCTCGCTGGCTCCTTGCCTCCTTGCCTCCTTGCCTCCTTGCCTCCTTGCCTCCT
CATGAGCCCTGCAGTACGGCATCTGCTATGATGCACCTGGCGGGTCCGCTGTGTGTGAGCCTGGCT
GGAGTGGCCCCGCTGCAGCCAGAGCCTGGCCCCGAGACGCTGTGAGTCCCAGCCGTGCAGGGCCGGTGG
GACATGCAGCAGCGATGGAATGGGTTTCCACTGCACCTGCCCGCCTGGTGTCCAGGGACGTGAGTGTGAA
CTCCTCTCCCCCTGCACCCGAACCCCTGTGAGCATGGGGCCGCTGCGAGTCTGCCCTGGCCAGCTGC
CTGTCTGCTCCTGCCCCAGGGTGGCAAGGCCACGATGCCAGCAGGATGTGGACGAGTGTGCTGGCCC
CGCACCTGTGGCCCTCATGGTATCTGCACCACTGGCAGGGAGTTTCCAGTGCACCTGCCATGGAGGG
TACACTGGCCCTTCTGCGATCAGGACATCAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGT
GCCAAGACGGCGTGGGCTCCTTTCTGCTCCTGCCTCCTGGTTTCGCCGGCCACGATGCGCCCGCA
TGTGGATGAGTGCCTGAGCAACCCCTGCGGCCCGGGCACCTGTACCGACCACGTGGCCTCCTTACCTGC
ACCTGCCCGCCAGGCTACGGAGGCTTCCACTGCGAACAGGACCTGCCCGACTGCAGCCCCAGCTCCTGCT
TCAATGGCGGGACCTGTGTGGACGGCGTGAACCTCGTTCAGCTGCCTGTGCGCTCCCGGCTACACAGGAGC
CCACTGCCAACATGAGGCAGACCCCTGCCTCTCGCGCCCTGCCTACACGGGGCGTCTGACGCGCCGCC
CACCTGGCTTCCGCTGCACCTGCCTCGAGAGCTTACGGGCCCGCAGTGCCAGACGCTGGTGGATTGGT
GCAGCCGCCAGCCTGTCAAACGGGGTGCCTCGCGCTCCAGACTGGGGCTATTGCCCTTGTCCCCTGG
ATGGAGCGGACGCTGTGACATCCGAAGCTTGCCTGCAGGGAGGCCGAGCCAGATCGGGGTGCGG
CTGGAGCAGCTGTGTGAGCGGGTGGCAGTGTGTGGATGAAGACAGCTCCCACTACTGCGTGTGCCAG
AGGGCCGTAAGTGGTACCCACTGTGAGCAGGAGGTGGACCCTGCTTGGCCAGCCCTGCCAGCATGGGGG
GACCTGCCGTGGCTATATGGGGGCTACATGTGTGAGTGTCTTCTGGTACAATGGTGATAACTGTGAG
GACGAGTGGACGAGTGTGCCTCCAGCCCTGCCAGCACGGGGTTTATGCATTGACCTCGTGGCCCGCT
ATCTCTGCTCCTGTCCCCAGGAACGCTGGGGTGTCTGCGAGATTAATGAGGATGACTGCGGCCAGG
CCCACCGTGGACTAGGGCCCCGGTGCCTACACAATGGCACCTGCGTGGACCTGGTGGTGGTTTCCGC
TGCACCTGTCCCCAGGATACACTGGTTTGCCTGCGAGGCAGACATCAATGAGTGTGCTCAGTGCCT
GCCACGCGGCACACCCGGGACTGCCTGCAGGACCCAGGCGGAGGTTTCCGTTGCCCTTGTGATGCTGG
CTTCTCAGGCTCCTGCTGTGAGTGTCTGCTCCTTCCGAGTCCCAGCATGCCAGCATGGAGGCCAG
TGCCGCTTAGCCCGGGTCTGGGGTGGGCTGACCTTACCTGTCACTGTGCCAGCCGTTCTGGGGT
CGCGTTGCGAGCGGGTGGCGGCTCCTGCCGGGAGCTGCAGTGGCCGGTGGGCGTCCCATGCCAGCAGAC
GCCCGCGGGCCGCGCTGCGCCTGCCCCCCAGGGTGTGCGGGACCTCCTGCCGAGCTTCCCGGGTGC
CCGCGGGGGCCAGCAACGCCAGCTGCGCGGCCCCCCCTGTCTCCAGGGGGCTCCTGCCGCCCGCGC
CGCTCGCGCCCTTCTCCGCTGCGCTTGCAGCAGGGCTGGACCAGGGCCGCGCTGCGAGGCGCCCGCCG

GGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCCGCCTGCCAGGCCAAGCGCGGGGACCAGCGC
 TGCGACCCGAGTGCAACAGCCCAGGCTGCGGCTGGGACGGCGGCGACTGCTCGTGAGCGTGGGCGACC
 CCTGGCGGCAATGCGAGGCGCTGCAGTGTGGCGCCTTTCAACAACAGCCGCTGCGACCCCGCCTGCAG
 CTCGCCCGCTGCCTCTACGACAACCTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTGAACCCGGTG
 TACGAGAAGTACTGCGCCGACCACTTTGCCAGCGGCGCTGCGACCAGGGCTGCAACACGGAGGAGTGCG
 GCTGGGATGGGCTGGATTGTGCCAGCGAGGTCCCGCCCTGCTGGCCCGCGCGTGTGGTGTCTCACAGT
 GCTGTGCCGCCAGAGGAGCTACTGCGTTCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCTGCGC
 ACCTCGCTGCGCTTCCGCTGGACGCGCACGGCCAGGCCATGGTCTTCCCTTACCACCGCCTAGTCCTG
 GCTCCGAACCCCGGGCCCGTCCGGAGCTGGCCCCGAGGTGATCGGCTCGGTAGTAATGTGGAGATTGA
 CAACCGGCTCTGCCTGCAGTCGCTGAGAATGATCACTGCTTCCCGATGCCAGAGCGCCGCTGACTAC
 CTGGGAGCGTTGTGAGCGGTGGAGCGCTGGACTTCCCGTACCCACTGCGGGACGTGCGGGGGAGCCGC
 TGGAGCCTCCAGAACCAGCGTCCCGCTGCTGCCACTGCTAGTGGCGGGCGTGTCTTGTGCTGGTCAT
 TCTCGTCTGGGTGTATGGTGGCCCGGCGCAAGCGGAGCACAGCACCCCTCTGGTTCCTGAGGGCTTC
 TCACTGCACAAGGACGTGGCCTCTGGTACAAGGGCCGGCGGAAACCCGTGGCCAGGACGCGCTGGGCA
 TGAAGAACATGGCCAAGGGTGAAGCCTGATGGGGAGGTGGCCACAGACTGGATGGACACAGAGTGCC
 AGAGGCCAAGCGCTAAAGGTAGAGGAGCCAGGCATGGGGCTGAGGAGGCTGTGGATTCCGCTCAGTGG
 ACTCAACACCATCTGGTGTGCTGACATCCGCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCG
 ACGCAGATGCTGATGGCATGGATGTCAATGTGCGTGGCCAGATGGCTTACCCCGCTAATGCTGGCTTC
 CTTCTGTGGGGGGCTCTGGAGCCAATGCCAATGAAGAGGATGAGGCAGATGACACATCAGCTAGCATC
 ATCTCCGACCTGATCTGCCAGGGGGCTCAGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTGC
 ACCTGGCTGCCGTTATGCCCGTGTGATGCAGCCAAGCGGCTGCTGGATGCTGGGGCAGACCAATGC
 CCAGGACCACTCAGGCCGCACTCCCTGCACACAGCTGTCACAGCCGATGCCAGGGTGTCTTCCAGATT
 CTCATCCGAAACCGCTTACAGACTTGGATGCCCGCATGGCAGATGGCTCAACGCCACTGATCTGGCG
 CCGCCTGGCAGTAGAGGGCATGGTGAAGAGCTCATGCCAGCCATGCTGATGTAATGCTGTGGATGA
 GCTTGGGAAATCAGCCTTACACTGGGCTGCGGCTGTGAACAACGTGGAAGCCACTTTGGCCCTGTCAA
 AATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGGAGACCCCTATTCTGGCCGCCGCGAGGGCA
 GCTATGAGGCTGCCAAGCTGCTGTTGGACCACTTTGCCAACCGTGAATCACCAGCACCTGGACAGGCT
 GCCCGGGGACGTAGCCAGGAGAGACTGCACCAGGACATCGTGCCTTGTGGATCAACCAGTGGGCC
 CGCAGCCCCCGGTCCACAGGCTGGGGCTCTGCTCTGTCTCCAGGGCCCTTCTCCCTGGCCTCA
 AAGCGCACAGTCGGGGTCCAAGAAGAGCAGGAGGCCCCCGGAAGCGGGGCTGGGGCCGAGGGCC
 CCGGGGGCGGGCAAGAAGCTGACGCTGGCCTGCCGGGCCCTGGCTGACAGCTCGGTACGCTGTG
 CCGTGGACTCGCTGGACTCCCCGCGCCTTTCGGTGGGCCCTGCTTCCCTGGTGGCTTCCCTTG
 AGGGGCCATGACAGTGCCTGCACTGCACTGCACTGCACTGCTCTGGCACAGCTTGGTGGCCAGGCCGGGCGG
 TCTAGGGCGCCAGCCCCCTGGAGGATGTGACTCAGCCTGGGCTGCTGAACCTGTGGCTGTGCCCTC
 GATTGGGCCCGGCTGCCCCACCTGCCCTCCAGGCCCTCGTTCTGCTGCCACTGGCGCCGGGACCC
 AGCTGTCAACCCAGGGACCCCGTCTCCCGCAGGAGCGGCCCCCGCTTACCTGGCAGTCCCAGGACA
 TGGCGAGGAGTACCCGGCGGCTGGGGCACACAGCAGCCCCCAAGGCCCGCTTCTGCGGGTCCCAGT
 GAGCACCTTACCTGACCCATCCCCGAATCCCCTGAGCACTGGGCCAGCCCCACCTCCCTCCCTCT
 CAGACTGGTCCGAATCCAGCCTAGCCAGCCACTGCCACTGGGGCCATGGCCACCACCCTGGGGCACT
 GCCTGCCAGCCACTTCCCTGTCTGTTCCAGCTCCCTGCTCAGGCCAGACCAGCTGGGGCCCCAG
 CCGGAAGTTACCCCAAGAGGCAAGTGTGGCC

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGTTTAA

Protein Sequence: >RC402177 representing NM_000435
 Red=Cloning site Green=Tags(s)

MGPGARRRRRRRPMSPPPPPPVRLPLLLLLAGPGAAAPPCLDGLSPCANGGRCTQLPSREAACLPPG
 WVGERCQLEDPCSHGSPCAGRVCQSSVAVGTARFSCRCPRGFRGPDCSLPDPCLSSPCAHGARCSVGPDG
 RFLCSCPPGYQGRSCRSDVDECRVGEPCRHHGTCLNTPGSFRCQCPAGYTGPLCENPAVPCAPSPCRNGG
 TCRQSGDLTYDCACLPGFEGQNCENVVDDCPGHRCLNGGTCTVDGVNTYNCQCPPEWTGQFCTEDVDECQL
 QPNACHNGGTCTFNTLGGHSCVCVNGWTGESCSQNIDDCATAVCFHGATCHDRVASFYCACPMGKTGLLCH
 LDDACVSNPCHEDAICDTPVNGRAICTCPPGFTGGACDQDVDECSIGANPCEHLGRCVNTQGSFLCQCG
 RGYTGPRCETDVNECLSGPCRQATCLDRIGQFTICIMAGFTGTyceVDIDEQSSPCVNGGVCKDRVNG
 FSCTCPSGFSGSTCQLDVDECASTPCRNGAKCVDQPDGYECRAEGFEGTLCDRNVDDCSPDPCHHGRCV
 DGIASFSCACAPGYTGTRCESQVDECRSQPCRHHGKCLDLVDKYLRCRPSGTTGVNCEVNIDDCASNPCT
 FGVCRDGINRYDCVCQPGFTGPLCNVEINECASSPCGEGGSCVDGENFRCLCPPGSLPPLCLPPSHPCA
 HEPCHSHGICYDAPGGFRCVCEPGWSGPRCSQSLARDACESQPCRAGGTCSSDGMGFHCTCPPGVQGRQCE
 LLSPCTPNPCEHGRCESAPGQLPVCSCPQGWQPRCQDQVDECAGPAPCGPHGICTNLAGFSCTCHGG
 YTGPSCDQDINDCDPNPCLNGGSCQDGVGSFSCSCLPGFAGPRCARDVDECLSNPCGPGTCTDHVASFTC
 TCPPGYGGFHCEQDLPDCSPSSCFNGGTCTVDGVNSFSCLCRPGYTGHAHCQHEADPCLSRPCLHGGVCSAA
 HPGFRCTCLESFTGPQCQTLVDWCSRQPCQNGRRVQTGAYCLCPPGWSGRLCDIRSLPCREAAAQIGVR
 LEQLCQAGGQCVEDESSHYCVCEGRTGSHCEQEVDPCAQPCQHGTCRGMGGYMCECLPGYNGDNCE
 DDVDECASQPCQHGGSIDL VARYLCSPPGTLGVLCINEDDCGPGPPLDSGPRCLHNGTCDVLDVGGFR
 CTCPPGYTGLRCEADINECRSGACHAAHTRDCLQDPGGGFRCLCHAGFSGPRCQTVLSPCESQPCQHGQ
 CRPSPGPGGGLTFTCHCAQPFWGPRCERVARSCRELQCPVGVPCQQTTPRGPRCACPPGLSGPSCRSPFGS
 PPGASNASCAAAPCLHGGSCRPAPLAPFFRCACAQGWTPRCEAPAAAPEVSEEPRCRAACQAKRGDQR
 CDRECNSPGCGWDGGDCSLSVGDPWRQCEALQCWRLFNNRCDPACSSPACLYDNFDCHAGGRERTCNPV
 YEKYCADHFADGRCDQGCNTEECGWDLDCASEVPALLARGVLLVTVLLPPEELLRSSADFLQRLSAILR
 TSLRFRLDAHQAAMVFPYHRPSPGSEPRARRELAPEVIGSVVMLEIDNRLCLQSPENDHCFDAQSAADY
 LGALSAVERLDFPYPLRDVRGELEPEPEPSVPLPLLVAGAVLLLVLVLMVARRKREHSTLWFPEGF
 SLHKDVASGHKGRREPVGQDALGMKNMAKGESLMGEVATDWMTECEPEAKRLKVEEPMGAEAAVDCRQW
 TQHHLVAADIRVAPAMALTPPQGDADADGMDVNVVRGPDGFTPLMLASFCCGGALEPMPTEEDEADTSASI
 ISDLICQGAQLGARTDRTGETALHLAARYARADAAKRLLDAGADTNAQDHSGRTPLHTAVTADAQGVFQI
 LIRNRSTDL DARMADGSTALILAAARLAVEGMVEELIASHADVNAVDELGKSALHWA AVNNVEATLALLK
 NGANKDMQDSKEETPLFLAAREGSYEA AKLLLDFANREITDHLDRLPDVAQERLHQDIVRLLDQPSGP
 RSPPGPHGLPGLLCPGFAFLPGLKAAQSGSKSRPPGKAGLGPQGRGRGKCLTACPGPLADSSVTL S
 PVDSLDSRPFPGPPASPGGFLEGPYAAATATAVSLAQLGGPGRAGLGRQPPGGCVLSLGLLNPVAVPL
 DWARLPPAPPGPSFLLPLAPGQQLLNPGTVPSPQERPPPYLAVPGHGEEYPAAGAHSSPPKARFLRVPS
 EHPYLTPSPESPEHWASPPSSLSDWSESTPSPATATGAMATTTGALPAQPLPLSVPSLAQAQTQLGPQ
 PEVTPKRQVLA

SGP TRTRRLEQKLI SEEDLAANDILDYKDDDDKV

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 *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]