

Product datasheet for RC402117

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:	C251R
Affected Codon#:	251
Affected NT#:	751
Nucleotide Mutation:	NOTCH3 Mutant (C251R), 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:	Sgfl-MluI
ORF Nucleotide Sequence:	>RC402117 representing NM_000435 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCCGGGGCCCGTGGCCGCCGCCCGCCGTCGCCGATGTCGCCGCCACCGCCACCGCCACCCG
TGCGGGCGCTGCCCTGCTGCTGCTGCTAGCGGGCCGGGGGCTGCAGCCCCCTTGCTGGACGGAAG
CCCGTGTGCAAATGGAGGTCGTTGCACCCAGCTGCCCTCCCGGGAGGCTGCCTGCCTGTGCCCGCTGGC
TGGGTGGGTGAGCGGTGTCAGCTGGAGGACCCCTGCTCACTCAGGCCCTGTGCTGGCCGTGGTGTCTGCC
AGAGTTCAGTGGTGGCTGGCACCGCCGATTCTCATGCCGGTGCCCCGTGGCTCCGAGGCCCTGACTG
CTCCCTGCCAGATCCCTGCCTCAGCAGCCCTTGTGCCACGGTGCCCGCTGCTCAGTGGGGCCCGATGGA
CGCTTCTCTGCTCCTGCCACCTGGTACCAGGGCCGACGCTGCCGAAGCGACGTGGATGAGTGCCGGG



[View online »](#)

TGGGTGAGCCCTGCCGCCATGGTGGCACCTGCCTCAACACACCTGGCTCCTCCGCTGCCAGTGTCCAGC
TGGCTACACAGGGCCACTATGTGAGAACCCCGCGGTGCCCTGTGCACCCTCACCATGCCGTAACGGGGGC
ACCTGCAGGCAGAGTGGCGACCTCACTTACGACTGTGCCTGTCTTCTGGGTTTGGGGTTCAGAAATTGTG
AAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAATGGGGGGACACGCGTGGATGGCGTCAACAC
CTAACTGCCAGTGCCTCCTGAGTGGACAGGCCAGTTCGCACGGAGGACGTGGATGAGTGTGAGTGTG
CAGCCCAACGCCTGCCACAATGGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGCTGCGTGTGTGCA
ATGGCTGGACAGGCGAGAGCTGCAGTCAGAATATCGATGACTGTGCCACAGCCGTGCTTCCATGGGGC
CACCTGCCATGACCGCGTGGCTTCTTTCTACTGTGCCTGCCCATGGGCAAGACTGGCCTCCTGTGTAC
CTGGATGACGCCTGTGTGAGCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGCC
GGGCCATTTGCACCTGTCTCCCGGCTTACGGGTGGGGCATGTGACCAGGATGTGGACGAGTGTCTAT
CGGCGCAACCCCTGCGAGCACTTGGGCAGGTGCGTGAACACGACAGGGCTCCTTCTGTGCCAGTGTGCGT
CGTGGCTACACTGGACCTCGCTGTGAGACCGATGTCAACGAGTGTCTGTGCGGGCCCTGCCGAAACCAGG
CCACGTGCCTCGACCGCATAGGCCAGTTCACCTGTATCTGTATGGCAGGCTTACAGGAACCTATTGCGA
GGTGGACATTGACGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
TTCAGTGCACCTGCCCTCGGGCTTACAGCGCTCCACGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
CGCCCTGCAGGAATGGCGCCAAATGCGTGGACAGCCCGATGGCTACGAGTGGCCCTGTGCCGAGGGCTT
TGAGGGCACGCTGTGTGATCGCAACGTGGACGACTGCTCCCTGACCCATGCCACCATGGTGTGCGTGTG
GATGGCATCGCCAGCTTCTCATGTGCCTGTGCTCCTGGCTACACGGGCACACGCTGCGAGAGCCAGGTGG
ACGAATGCCCGACCCAGCCCTGCCGCCATGGCGGCAATGCCTAGACCTGGTGGACAAGTACCTGTGCCG
CTGCCCTTCTGGGACCACAGGTGTGAATGCGAAGTGAACATTGACGACTGTGCCAGCAACCCCTGCACC
TTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCTGGCTTACAGGGCCCTTT
GTAACGTGGAGATCAATGAGTGTGCTTCCAGCCATGCGGCGAGGGAGGTTCTGTGTGGATGGGAAAA
TGCTTCCGCTGCCTTCCCGCCTGGCTCCTTCCCGCCACTGCTCCTCCCGGAGCCATCCTGTGCTG
CATGAGCCCTGCAGTACGGCATCTGCTATGATGCACCTGGCGGGTCCGCTGTGTGTGAGCCTGGCT
GGAGTGGCCCCGCTGCAGCCAGAGCCTGGCCCCGAGACGCTGTGAGTCCCAGCCGTGCAGGGCCGTGG
GACATGCAGCAGCGATGGAATGGGTTTCCACTGCACCTGCCCGCCTGGTGTCCAGGGACGTGAGTGTGAA
CTCCTTCCCGCTGCACCCGAACCCCTGTGAGCATGGGGCCGCTGCGAGTCTGCCCTGGCCAGCTGC
CTGTCTGCTCCTGCCCCAGGGCTGGCAAGGCCACGATGCCAGCAGGATGTGGACGAGTGTGCTGGCCC
CGCACCTGTGGCCCTCATGGTATCTGCACCACTGGCAGGGAGTTTCCAGTGCACCTGCCATGGAGGG
TACACTGGCCCTTCTGCGATCAGGACATCAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGT
GCCAAGACGGCGTGGGCTCCTTTCTGCTCCTGCCTCCCTGGTTTCGCCGGCCACGATGCGCCCGCA
TGTGGATGAGTGCCTGAGCAACCCCTGCGGCCCGGGCACCTGTACCGACACAGTGGCCTCCTTACCTGC
ACCTGCCCGCCAGGCTACGGAGGCTTCCACTGCGAACAGGACCTGCCCGACTGCAGCCCCAGCTCCTGCT
TCAATGGCGGGACCTGTGTGGACGGCGTGAACCTCGTTCAGCTGCCTGTGCGCTCCCGGCTACACAGGAGC
CCACTGCCAACATGAGGCAGACCCCTGCCTCTCGCGCCCTGCCTACACGGGGGGCGTCTGACGCGCCGC
CACCTGGCTTCCGCTGCACCTGCCTCGAGAGCTTACGGGCCCGCAGTGCAGACGCTGGTGGATTGGT
GCAGCCGCCAGCCTTGTCAAACGGGGGTGCTGCGTCCAGACTGGGGCTATTGCCCTTGTCCCCTGG
ATGGAGCGGACGCTTGTGACATCCGAAGCTTGCCTGCAGGGAGGCCGAGCCAGATCGGGGTGCGG
CTGGAGCAGCTGTGTGAGCGGGTGGCAGTGTGTGGATGAAGACAGCTCCCACTACTGCGTGTGCCAG
AGGGCCGTAAGTGGTACCCACTGTGAGCAGGAGGTGGACCCTGCTTGGCCAGCCCTGCCAGCATGGGGG
GACCTGCCGTGGCTATATGGGGGCTACATGTGTGAGTGTCTTCTGGCTACAATGGTGATAACTGTGAG
GACGAGTGGACGAGTGTGCCTCCAGCCCTGCCAGCACGGGGTTTATGCATTGACCTCGTGGCCCGCT
ATCTCTGCTCCTGTCCCCAGGAACGCTGGGGGTGCTCTGCGAGATTAATGAGGATGACTGCGGCCAGG
CCCACCGCTGGACTCAGGGCCCCGCTGCCTACACAATGGCACCTGCGTGGACCTGGTGGTGGTTTCCGC
TGCACCTGTCCCCAGGATACACTGGTTTGGCTGCGAGGCAGACATCAATGAGTGTGCTCAGTGCCT
GCCACGCGGCACACCCGGGACTGCCTGCAGGACCCAGGCGGAGGTTTCCGTTGCCCTTGTGATGCTGG
CTTCTCAGGCTCCTGCTGTGAGTGTGCTGCTCCTGCGAGTCCCAGCATGCCAGCATGGAGGCCAG
TGCCGCTTAGCCCGGTCTGGGGTGGGCTGACCTTACCTGTCACTGTGCCAGCCGTTCTGGGGTCTC
CGCGTTGCGAGCGGGTGGCGGCTCCTGCCGGGAGCTGCAGTGGCCGGTGGGGCTCCCATGCCAGCAGAC
GCCCGCGGGCCGCGCTGCGCCTGCCCCCCAGGGTTGTGCGGACCCTCCTGCCGAGCTTCCCGGGTGC
CCGCGGGGGCCAGCAACGCCAGCTGCGCGGCCCCCTGTCTCCACGGGGGCTCCTGCCGCCCGCGC
CGCTCGCGCCCTTCTCCGCTGCGCTTGCAGCAGGGCTGGACCAGGGCCGCGCTGCGAGGCGCCCGCCG

GGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCCGCTGCCAGGCCAAGCGCGGGGACCAGCGC
TGCGACCCGAGTGCAACAGCCAGGCTGCGGCTGGGACGGCGGCGACTGCTCGTGAGCGTGGGCGACC
CCTGGCGGCAATGCGAGGCGCTGCAGTGTGGCGCCTTTCAACAACAGCCGCTGCGACCCCGCTGCAG
CTCGCCCGCTGCCTCTACGACAACCTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTGAACCCGGTG
TACGAGAAGTACTGCGCCGACCACTTTGCCAGCGGCGCTGCGACCAGGGCTGCAACACGGAGGAGTGCG
GCTGGGATGGGCTGGATTGTGCCAGCGAGGTCCCGCCCTGCTGGCCCGCGCGTGTGGTGTCTCACAGT
GCTGTGCCGCCAGAGGAGCTACTGCGTTCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCTGCGC
ACCTCGCTGCGCTTCCGCTGGACGCGCACGGCCAGGCCATGGTCTTCCCTTACCACCGCCTAGTCCTG
GCTCCGAACCCCGGGCCCGTCCGGAGCTGGCCCGGAGGTGATCGGCTCGGTAGTAATGTGGAGATTGA
CAACCGGCTCTGCCTGCAGTGCCTGAGAATGATCACTGCTTCCCGATGCCAGAGCGCCGCTGACTAC
CTGGGAGCGTTGTGAGCGGTGGAGCGCTGGACTTCCCGTACCCACTGCGGGACGTGCGGGGGGAGCCGC
TGGAGCCTCCAGAACCAGCGTCCCGTGTGCCACTGCTAGTGGCGGGCGTGTCTGTGTGGTGTGAT
TCTCGTCTGGGTGTGATGGTGGCCCGGCGCAAGCGGAGCACAGCACCCCTGTGGTCCCTGAGGGCTTC
TCACTGCAACAAGGACGTGGCCTCTGGTACAAGGGCCGGCGGGAACCCGTGGCCAGGACGCGTGGGCA
TGAAGAACATGGCCAAGGGTGAAGCCTGATGGGGAGGTGGCCACAGACTGGATGGACACAGAGTGCC
AGAGGCCAAGCGCTAAAGGTAGAGGAGCCAGGCATGGGGCTGAGGAGGCTGTGGATTCCGCTCAGTGG
ACTCAACACCATCTGGTGTGTGACTCCGCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCG
ACGAGATGCTGATGGCATGGATGTCAATGTGCGTGGCCAGATGGTTCACCCCGCTAATGCTGGCTTC
CTTCTGTGGGGGGCTCTGGAGCCAATGCCAATGAAGAGGATGAGGCAGATGACACATCAGTACATC
ATCTCCGACCTGATCTGCCAGGGGGCTCAGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTGC
ACCTGGCTGCCGTTATGCCCGTGTGATGCAGCAAGCGGCTGCTGGATGCTGGGGCAGACCAATGC
CCAGGACCACTCAGGCCGCACTCCCTGCACACAGCTGTCACAGCCGATGCCAGGGTGTCTTCCAGATT
CTCATCCGAAACCGCTTACAGACTTGGATGCCCGCATGGCAGATGGCTCAACGGCACTGATCTGGCG
CCCGCTGGCAGTAGAGGGCATGGTGAAGAGCTCATGCCAGCCATGCTGATGTAATGCTGTGGATGA
GCTTGGAAATCAGCCTTACACTGGGCTGCGGCTGTGAACAACGTGGAAGCCACTTTGGCCCTGTCAA
AATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGGAGACCCCTATTCTGGCCGCCGCGAGGGCA
GCTATGAGGCTGCCAAGCTGCTGTTGGACCACTTTGCCAACCGTGAATCACCAGCACCTGGACAGGCT
GCCCGGGGACGTAGCCAGGAGAGACTGCACCAGGACATCGTGCCTTGTGGATCAACCAGTGGGCC
CGCAGCCCCCGGTCCACAGGCTGGGGCTCTGCTCTGTCTCCAGGGCCCTTCTCCCTGGCCTCA
AAGCGCACAGTCGGGGTCCAAGAAGAGCAGGAGGCCCGGGAAGCGGGGCTGGGGCCGAGGGCC
CCGGGGCGGGCAAGAAGCTGACGCTGGCCTGCCGGGCCCTGGCTGACAGCTCGGTACGCTGTG
CCCGTGGACTCGCTGGACTCCCCGCGGCTTTCGGTGGGCCCTGCTTCCCTGGTGGCTTCCCTTG
AGGGGCCATGACAGTGCCTGCACTGCACTGCACTGCACTGCTCTGGCACAGCTTGGTGGCCAGGCCGGCGGG
TCTAGGGCGCCAGCCCCCTGGAGGATGTGACTCAGCCTGGGCTGCTGAACCTGTGGCTGTGCCCTC
GATTGGGCCCGGCTGCCCCACCTGCCCTCCAGGCCCTCGTTCTGCTGCCACTGGCGCCGGGACCC
AGCTGTCAACCCAGGGACCCCGTCTCCCGCAGGAGCGGCCCGCTTACCTGGCAGTCCCAGGACA
TGGCGAGGAGTACCCGGCGGCTGGGGCACACAGCAGCCCCCAAGGCCCGCTTCTGCGGGTCCCAGT
GAGCACCTTACCTGACCCATCCCCGAATCCCCTGAGCACTGGGCCAGCCCCACCTCCCTCCCTCT
CAGACTGGTCCGAATCCAGCCTAGCCAGCCACTGCCACTGGGGCCATGGCCACCACCCTGGGGCACT
GCCTGCCAGCCACTTCCCTGTCTGTTCCAGCTCCCTGCTCAGGCCAGCCAGCTGGGGCCAG
CCGGAAGTTACCCCAAGAGGCAAGTGTGGCC

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGTTTAA

Protein Sequence: >RC402117 representing NM_000435
 Red=Cloning site Green=Tags(s)

MGPGARRRRRRRPMSPPPPPPVRLPLLLLLAGPGAAAPPCLDGGSPCANGGRCTQLPSREAACLPPG
 WVGERCQLEDPCSHGSPCAGRVCQSSVAVGTARFSCRCPRGFRGPDCSLPDPCLSSPCAHGARCSVGPDG
 RFLCSCPPGYQGRSCRSDVDECRVGEPCRHHGTCLNTPGSFRCQCPAGYTGPLCENPAVPCAPSPCRNGG
 TCRQSGDLTYDCACLPGFEGQNCENVVDDCPGHRCLNGGTRVDGVNTYNCQCPPEWTGQFCTEDVDECQL
 QPNACHNGGTCFNTLGGHSCVCVNGWTGESCSQNIDDCATAVCFHGATCHDRVASFYCACPMGKTGLLCH
 LDDACVSNPCHEDAICDTPVNGRAICTCPPGFTGGACDQDVDECSIGANPCEHLGRCVNTQGSFLCQCG
 RGYTGPRCETDVNECLSGPCRQATCLDRIGQFTICMAGFTGTyceVDIDEQSSPCVNGGVCKDRVNG
 FSCTCPSGFSGSTCQLDVDECASTPCRNGAKCVDQPDGYECRAEGFEGTLCDRNVDDCSPDPCHHGRCV
 DGIASFSCACAPGYTGTRCESQVDECRSQPCRHHGKCLDLVDKYLRCRPSGTTGVNCEVNIDDCASNPCT
 FGVCRDGINRYDCVCQPFTGPLCNVEINECASSPCGEGGSCVDGENFRCLCPPGSLPPLCLPPSHPCA
 HEPCHSHGICYDAPGGFRVCPEPWSGPRCSQSLARDACESQPCRAGGTCSSDGMGFHCTCPPGVQGRQCE
 LLSPCTPNPCEHGRCESAPGQLPVCSCPQGWQPRCQDQVDECAGPAPCGPHGICTNLAGFSCTCHGG
 YTGPSCDQDINDCDPNPCLNGGSCQDGVGSFSCSCLPGFAGPRCARDVDECLSNPCGPGTCTDHVASFTC
 TCPPGYGGFHCEQDLPDCSPSSCFNGGTCTVDGVNSFSCLCRPGYTGHAHCQHEADPCLSRPCLHGGVCSAA
 HPGFRCTCLESFTGPQCQTLVDWCSRQCQNGGRCVQTGAYCLCPPGWSGRLCDIRSLPCREAAAQIGVR
 LEQLCQAGGQCQVDESSHYCVCEPGRGTSHEQEVDPCLAQPCQHGGRGCRGMYGGYMCECLPGYNGDNCE
 DDVDECASQPCQHGGSIDL VARYLCSCPPGTLGVLCEINEDDCGPGPPLDSGPRCLHNGTCDVLDVGGFR
 CTCPPGYTGLRCEADINECRSGACHAAHTRDCLQDPGGGFRCLCHAGFSGPRCQTVLSPCESQPCQHGQ
 CRPSPGPGGGLTFTCHCAQPFWGPRCERVARSCRELQCPVGVPCQQTTPRGPRCACPPGLSGPSCRSPFGS
 PPGASNASCAAAPCLHGGSCRPAPLAPFFRCACAQGWTPRCEAPAAAPEVSEEPRCRAACQAKRGDQR
 CDRECNSPGCGWDGGDCSLSVGDPWRQCEALQCWRLFNNRCDPACSSPACLYDNFDCHAGGRERTCNPV
 YEKYCADHFADGRCDQGCNTEECGWDLDCASEVPALLARGVLLVTVLLPPEELLRSSADFLQRLSAILR
 TSLRFRLDAHQAAMVFPYHRPSPGSEPRARRELAPEVIGSVVMLEIDNRLCLQSPENDHCFDAQSAADY
 LGALSAVERLDFPYPLRDVARGELEPEPEPSVPLPLLVAGAVLLLVLVLGVMVARRKREHSTLWFPEGF
 SLHKDVASGHKGRREPVGQDALGMKNMAKGESLMGEVATDWMTECEPEAKRLKVEEPMGAEAAVDCRQW
 TQHHLVAADIRVAPAMALTPPQGDADADGMDVNVVRGPDGFTPLMLASFCCGGALEPMPTEEDEADTSASI
 ISDLICQGAQLGARTDRTGETALHLAARYARADAAKRLLDAGADTNAQDHSGRTPLHTAVTADAQGVFQI
 LIRNRSTDL DARMADGSTALILAAARLAVEGMVEELIASHADVNAVDELGKSALHWA AVNNVEATLALLK
 NGANKDMQDSKEETPLFLAAREGSYEA AKLLLDFANREITDHLDRLPDVAQERLHQDIVRLLDQPSGP
 RSPPGPHGLPGLLCPGFAFLPGLKAAQSGSKSRPPGKAGLGPQGRGRGKLLTACPGPLADSSVTL S
 PVDSLDSRPFPGPPASPGGFLEGPYAAATATAVSLAQLGGPGRAGLGRQPPGGCVLSLGLLNPVAVPL
 DWARLPPPAPPGPSFLLPLAPGQQLLNPGTVPSPQERPPPYLAVPGHGEEYPAAGAHSSPPKARFLRVPS
 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]