

Product datasheet for RC402142

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:	C446S
Affected Codon#:	446
Affected NT#:	1337
Nucleotide Mutation:	NOTCH3 Mutant (C446S), 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:	>RC402142 representing NM_000435 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCCGGGGCCCGTGGCCGCCGCCCGCCGTCGCCGATGTCGCCGCCACCGCCACCGCCACCCG
TGCGGGCGCTGCCCTGCTGCTGCTGCTAGCGGGCCGGGGGCTGCAGCCCCCTTGCTGGACGGAAG
CCCGTGTGCAAATGGAGGTCGTTGCACCCAGCTGCCCTCCGGGAGGCTGCCTGCCTGTGCCCGCTGGC
TGGGTGGGTGAGCGGTGTCAGCTGGAGGACCCCTGCTCACTCAGGCCCTGTGCTGGCCGTGGTGTCTGCC
AGAGTTCAGTGGTGGCTGGCACCGCCGATTCTCATGCCGGTGCCCGTGGCTCCGAGGCCCTGACTG
CTCCCTGCCAGATCCCTGCCTCAGCAGCCCTTGTGCCACGGTGCCCGCTGCTCAGTGGGGCCCGATGGA
CGTTCTCTGCTCCTGCCACCTGGTACCAGGGCCGACGCTGCCGAAGCGACGTGGATGAGTGCCGGG



[View online »](#)

TGGGTGAGCCCTGCCGCCATGGTGGCACCTGCCTCAACACACCTGGCTCCTCCGCTGCCAGTGTCCAGC
 TGGCTACACAGGGCCACTATGTGAGAACCCCGCGGTGCCCTGTGCACCCTCACCATGCCGTAACGGGGG
 ACCTGCAGGCAGAGTGGCGACCTCACTACGACTGTGCCTGTCTTCTGGGTTTGGGGTTCAGAAATTGTG
 AAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAATGGGGGACATGCGTGGATGGCGTCAACAC
 CTAACTGCCAGTGCCTCCTGAGTGGACAGGCCAGTTCGCACGGAGGACGTGGATGAGTGTGAGTGTG
 CAGCCCAACGCCTGCCACAATGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGCTGCGTGTGTGCA
 ATGGCTGGACAGGCGAGAGCTGCAGTCAGAATATCGATGACTGTGCCACAGCCGTGCTTCCATGGGGC
 CACCTGCCATGACCGCGTGGCTTCTTTCTACTGTGCCTGCCCATGGGCAAGACTGGCCTCCTGTGTAC
 CTGGATGACGCCTGTGTGAGCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGC
 GGGCCATTGACCTGTCTCCCGGCTTACGGGTGGGCATGTGACCAGGATGTGGACGAGTGTCTAT
 CGGCGCAACCCCTGCGAGCACTGGGCAGGTGCGTGAACACGACAGGGCTCCTTCTGTGCCAGTGGGT
 CGTGGCTACACTGGACCTCGCTGTGAGACCGATGTCAACGAGTGTCTGTGCGGGCCCTGCCGAAACAGG
 CCACGTCCCTGACCGCATAGGCCAGTTCACCTGTATCTGTATGGCAGGCTTACAGGAACCTATTGCGA
 GGTGGACATTGACGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGT
 TTCAGTGCACCTGCCCTCGGGCTTACAGCGCTCCACGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGT
 CGCCCTGCAGGAATGGCGCAAAATGCGTGGACAGCCGATGGCTACGAGTGGCCTGTGCCGAGGGCTT
 TGAGGGCACGCTGTGTGATCGCAACGTGGACGACTGCTCCCTGACCCATGCCACCATGGTGCCTGCGT
 GATGGCATCGCCAGCTTCTCATGTGCCTGTGCTCCTGGCTACACGGGCACACGCTGCGAGAGCCAGGTGG
 ACGAATGCCGACAGCCAGCCCTGCCGCCATGGCGGCAAAATGCCTAGACCTGGTGGACAAGTACCTTGCCG
 CTGCCCTTCTGGGACCACAGGTGGAATGCGAAGTGAACATTGACGACTGTGCCAGCAACCCCTGCACC
 TTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCTGGCTTACAGGGCCCTTT
 GTAACGTGGAGATCAATGAGTGTGCTTCCAGCCATGCGGCGAGGGAGGTTCTGTGTGGATGGGAAAA
 TGGCTCCGCTGCCTTGCCTCGCTGGCTCCTTGCCTCCTGCTCCTGCTCCTGCTCCTGCTCCTGCTCCT
 CATGAGCCCTGCAGTCACGGCATCTGCTATGATGCACCTGGCGGGTCCGCTGTGTGTGAGCCTGGCT
 GGAGTGGCCCCGCTGCAGCCAGAGCCTGGCCCCGAGACGCTGTGAGTCCCAGCCGTGCAGGGCCGTGG
 GACATGCAGCAGCGATGGAATGGGTTTCCACTGCACCTGCCCGCCTGGTGTCCAGGGACGTGAGTGTGAA
 CTCCTCTCCCCCTGCACCCGAACCCCTGTGAGCATGGGGCCGCTGCGAGTCTGCCCTGGCCAGCTGC
 CTGTCTGCTCCTGCCCCAGGGTGGCAAGGCCACGATGCCAGCAGGATGTGGACGAGTGTGCTGGCC
 CGCACCTGTGGCCCTCATGGTATCTGCACCACTGGCAGGGAGTTTCCAGTGCACCTGCCATGGAGGG
 TACACTGGCCCTTCTGCGATCAGGACATCAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGT
 GCCAAGACGGCGTGGGCTCCTTTCTGCTCCTGCCTCCCTGGTTTCGCCGGCCACGATGCGCCCGCA
 TGTGGATGAGTGCCTGAGCAACCCCTGCGGCCCGGGCAGCTGTACCGACACAGTGGCCTCCTTACCTGC
 ACCTGCCCGCCAGGCTACGGAGGCTTCCACTGCGAACAGGACCTGCCCGACTGCAGCCCCAGCTCCTGCT
 TCAATGGCGGGACCTGTGTGGACGGCGTGAACCTCGTTCAGCTGCCTGTGCCGTCCCGGCTACACAGGAGC
 CCACTGCCAACATGAGGCAGACCCCTGCCTCTCGCGCCCTGCCTACACGGGGGGCGTCTGACGCGCCGC
 CACCCTGGCTTCCGCTGCACCTGCCTCGAGAGCTTACGGGCCCGCAGTGCAGACGCTGGTGGATTGGT
 GCAGCCGCCAGCCTTGTCAAACGGGGGTGCTGCGTCCAGACTGGGGCTATTGCCCTTGTCCCCTGG
 ATGGAGCGGACGCTCTGTGACATCCGAAGCTTGCCTGCAGGGAGGCCGAGCCAGATCGGGGTGCGG
 CTGGAGCAGCTGTGTGAGCGGGTGGCAGTGTGTGGATGAAGACAGCTCCCACTACTGCGTGTGCCAG
 AGGGCCGTAAGTGGTACTGAGCAACCCCTGCGGCCCGGGCAGCTGTGAGCCCTGCTTGGCCAGCCCTGCCAGCATGGGG
 GACCTGCCGTGGCTATATGGGGGCTACATGTGTGAGTGTCTTCTGGCTACAATGGTGATAACTGTGAG
 GACGAGTGGACGAGTGTGCCTCCAGCCCTGCCAGCACGGGGTTTATGCATTGACCTCGTGGCCCGCT
 ATCTCTGCTCCTGTCCCCAGGAACGCTGGGGTGTCTGCGAGATTAATGAGGATGACTGCGGCCCAGG
 CCCACCGTGGACTCAGGGCCCCGCTGCCTACACAATGGCACCTGCGTGGACCTGGTGGTGGTTTCCGC
 TGCACCTGTCCCCAGGATACACTGGTTTGCCTGCGAGGCAGACATCAATGAGTGTGCTCAGTGCCT
 GCCACGCGGCACACCCGGGACTGCCTGCAGGACCCAGGCGGAGGTTTCCGTTGCCCTTGTGATGCTGG
 CTTCTCAGGCTCCTGCTGTGAGTGTGCTGCTCCTGCGAGTCCCAGCATGCCAGCATGGAGGCCAG
 TGCCGTCTAGCCCGGTCTGGGGTGGGCTGACCTTACCTGTCACTGTGCCAGCCGTTCTGGGGT
 CGCGTTGCGAGCGGGTGGCGGCTCCTGCCGGGAGCTGCAGTGGCCGGTGGGCGTCCCATGCCAGCAGAC
 GCCCGCGGGCCGCGCTGCGCCTGCCCCAGGGTGTGCGGACCCCTCCTGCCGAGCTTCCCGGGTGC
 CCGCGGGGGCCAGCAACGCCAGCTGCGCGGCCCCCTGTCTCCAGGGGGCTCCTGCCGCCCGCGC
 CGCTCGCGCCCTTCTCCGCTGCGCTTGCAGCAGGGCTGGACCGGGCCGCGCTGCGAGGCGCCCGCCG

GGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCCGCTGCCAGGCCAAGCGCGGGGACCAGCGC
 TGCGACCCGAGTGCAACAGCCAGGCTGCGGCTGGGACGGCGGCGACTGCTCGTGAGCGTGGGCGACC
 CCTGGCGGCAATGCGAGGCGCTGCAGTGTGGCGCCTTTCAACAACAGCCGCTGCGACCCCGCTGCAG
 CTCGCCCGCTGCCTCTACGACAACCTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTGAACCCGGT
 TACGAGAAGTACTGCGCCGACCACTTTGCCAGCGGCGCTGCGACCAGGCTGCAACACGGAGGAGTGGC
 GCTGGGATGGGCTGGATTGTGCCAGCGAGGTCCCGCCCTGCTGGCCCGCGCGTGTGGTGTCTCACAGT
 GCTGTGCCGCCAGAGGACTACTGCTTCCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCTGCGC
 ACCTCGCTGCGCTTCCGCTGGACGCGCACGGCCAGGCCATGGTCTTCCCTTACCACCGCCTAGTCCTG
 GCTCCGAACCCCGGGCCCGTCCGGAGCTGGCCCGGAGGTGATCGGCTCGGTAGTAATGTGGAGATTGA
 CAACCGGCTCTGCCTGCAGTGCCTGAGAATGATCACTGCTTCCCGATGCCAGAGCGCCGCTGACTAC
 CTGGGAGCGTTGTGAGCGGTGGAGCGCTGGACTTCCCGTACCCACTGCGGGACGTGCGGGGGAGCCGC
 TGGAGCCTCCAGAACCAGCGTCCCGTGTGCCACTGCTAGTGGCGGGCGTGTCTGTGTGGTGTGAT
 TCTCGTCTGGGTGTGATGGTGGCCCGCGCAAGCGGAGCACAGCACCCCTGTGGTCCCTGAGGGCTTC
 TCACTGCACAAGGACGTGGCCTCTGGTACAAGGGCCGGCGGAAACCCGTGGCCAGGACGCGTGGCA
 TGAAGAACATGGCCAAGGGTGAAGCCTGATGGGGAGGTGGCCACAGACTGGATGGACACAGAGTGCC
 AGAGGCCAAGCGCTAAAGGTAGAGGAGCCAGGCATGGGGCTGAGGAGGCTGTGGATTCCGCTCAGTGG
 ACTCAACACCATCTGGTGTGTGACTCCCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCG
 ACGCAGATGCTGATGGCATGGATGTCAATGTGCGTGGCCAGATGGCTTACCCCGCTAATGCTGGCTTC
 CTTCTGTGGGGGGCTCTGGAGCCAATGCCAATGAAGAGGATGAGGCAGATGACACATCAGTATGATC
 ATCTCCGACCTGATCTGCCAGGGGGCTCAGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTC
 ACCTGGCTGCCGTTATGCCCGTGTGATGCAGCAAGCGGCTGCTGGATGCTGGGGCAGACCAATGCG
 CCAGGACCACTCAGGCCGCACTCCCTGCACACAGCTGTCACAGCCGATGCCAGGGTGTCTTCCAGATT
 CTCATCCGAAACCGCTTACAGACTTGGATGCCCGCATGGCAGATGGCTCAACGGCACTGATCTGGCG
 CCGCCTGGCAGTAGAGGGCATGGTGAAGAGCTCATGCCAGCCATGCTGATGTAATGCTGTGGATGA
 GCTTGGGAAATCAGCCTTACACTGGGCTGCGGCTGTGAACAACGTGGAAGCCACTTTGGCCCTGTCAA
 AATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGGAGACCCCTATTCTGGCCGCCGCGAGGGCA
 GCTATGAGGCTGCCAAGCTGCTGTTGGACCACTTTGCCAACCGTGAATCACCAGCACCTGGACAGGCT
 GCCCGGGGACGTAGCCAGGAGAGACTGCACCAGGACATCGTGCCTTGTGGATCAACCAGTGGGCC
 CGCAGCCCCCGGTCCACAGGCTGGGGCTCTGCTGTCTCCAGGGCCCTTCTCCCTGGCCTCA
 AAGCGCACAGTCGGGGTCCAAGAAGAGCAGGAGGCCCGGGAAGCGGGGCTGGGGCCGAGGGCC
 CCGGGGCGGGCAAGAAGCTGACGCTGGCCTGCCGGGCCCTGGCTGACAGCTCGGTACGCTGTGCG
 CCGTGGACTCGCTGGACTCCCCGCGGCTTTCGGTGGGCCCTGCTTCCCTGGTGGCTTCCCTTG
 AGGGGCCATGACAGTGCCTGCACTGCACTGCACTGCACTGCTCTGGCACAGTGGTGGCCAGGCCGGCGGG
 TCTAGGGCGCCAGCCCCCTGGAGGATGTGACTCAGCCTGGGCTGCTGAACCTGTGGCTGTGCCCTC
 GATTGGGCCCGGCTGCCCCACCTGCCCTCCAGGCCCTCGTTCTGCTGCCACTGGCGCCGGGACCC
 AGCTGTCAACCCAGGGACCCCGTCTCCCGCAGGAGCGGCCCGCTTACCTGGCAGTCCCAGGACA
 TGGCGAGGAGTACCGGCGGCTGGGGCACACAGCAGCCCCAAAGGCCCGCTTCTGCGGGTCCCAGT
 GAGCACCTTACCTGACCCATCCCCGAATCCCCTGAGCACTGGGCCAGCCCCACCTCCCTCCCTCT
 CAGACTGGTCCGAATCCACGCTAGCCAGCCACTGCCACTGGGGCCATGGCCACCACCCTGGGGCACT
 GCCTGCCAGCCACTTCCCTGTCTGTTCCAGCTCCCTGCTCAGGCCAGACCAGCTGGGGCCCCAG
 CCGGAAGTTACCCCAAGAGGCAAGTGTGGCC

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGTTTAA

Protein Sequence: >RC402142 representing NM_000435
 Red=Cloning site Green=Tags(s)

MGPGARRRRRRRPMSPPPPPPVRLPLLLLLAGPGAAAPPCLDGGSPCANGGRCTQLPSREAACLPPG
 WVGERCQLEDPCHSGPCAGRVCQSSVAGTARFSCRCPRGFRGPDCSLPDPCLSSPCAHGARCSVGPDG
 RFLCSCPPGYQGRSCRSDVDECRVGEPCRHHGTCLNTPGSFRCQCPAGYTGPLCENPAVPCAPSPCRNGG
 TCRQSGDLTYDCACLPGFEGQNCENVVDDCPGHRCLNGGTCTVDGVNTYNCQCPPEWTGQFCTEDVDECQL
 QPNACHNGGTCTFNTLGGHSCVCVNGWTGESCSQNIDDCATAVCFHGATCHDRVASFYCACPMGKTGLLCH
 LDDACVSNPCHEDAICDTPVNGRAICTCPPGFTGGACDQDVDECSIGANPCEHLGRCVNTQGSFLCQCG
 RGYTGPRCETDVNECLSGPCRQATSLDRIGQFTICIMAGFTGTyceVDIDEQSSPCVNGGVCKDRVNG
 FSCTCPSGFSGSTCQLDVDECASTPCRNGAKCVDQPDGYECRAEGFEGTLCDRNVDDCSPDPCHHGRCV
 DGIASFSCACAPGYTGTRCESQVDECRSQPCRHHGKCLDLVDKYLRCRPSGTTGVNCEVNIDDCASNPCT
 FGVCRDGINRYDCVCQPFTGPLCNVEINECASSPCGEGGSCVDGENFRCLCPPGSLPPLCLPPSHPCA
 HEPCHSHGICYDAPGGFRVCPEPWSGPRCSQSLARDACESQPCRAGGTCSDDGMGFHCTCPPGVQGRQCE
 LLSPCTPNPCEHGRCESAPGQLPVCSCPQGWQPRCQDQVDECAGPAPCGPHGICTNLAGFSCTCHGG
 YTGPSCDQDINDCDPNPCLNGGSCQDGVGSFSCSCLPGFAGPRCARDVDECLSNPCGPGTCTDHVASFTC
 TCPPGYGGFHCEQDLPDCSPSSCFNGGTCTVDGVNSFSCLCRPGYTGHAHCQHEADPCLSRPCLHGGVCSAA
 HPGFRCTCLESFTGPQCQTLVDWCSRQCQNGGRCVQTGAYCLCPPGWSGRLCDIRSLPCREAAAQIGVR
 LEQLCQAGGQCVEDESSHYCVCEPGRGTGSHCEQEVDPLAQPCQHGGTCRGMGGYMCECLPGYNGDNCE
 DDVDECASQPCQHGGSCIDL VARYL CSCPPGTLGVLC EINEDDCGPGPPLDSGPRCLHNGTVDLVGGFR
 CTCPPGYTGLRCEADINECRSGACHAAHTRDCLQDPGGGFRCLCHAGFSGPRCQTVLSPCESQPCQHGGQ
 CRPSPGPGGGLTFTCHCAQPFWGP RCERVARSCRELQCPVGVPCQQT PRGPRCACPPGLSGPSCRSPFGS
 PPGASNASCAAAPCLHGGSCRPAPLAPFFRCACAQGWTPRCEAPAAAPEVSEEP RCPRAACQAKRGDQR
 CDRECNSPGCGWDGGDCSLSVGDPWRQCEALQCWRLFNNRCDPACSSPACLYDNFDCHAGGRERTCNPV
 YEKYCADHFADGRCDQGCNTEECGWDLDCASEVPALLARGVLLVTVLLPPEELLRSSADFLQRLSAILR
 TSLRFRLDAHQAAMVFPYHRPSPGSEPRARRELAPEVIGSVVMLEIDNRLCLQSPENDHCFDAQSAADY
 LGALSAVERLDFPYPLRDVRGELEPEPEPSVPLPLLVAGAVLLLVLVLMVARRKREHSTLWFPEGF
 SLHKDVASGHKGRREPVGQDALGMKNMAKGESLMGEVATDWMDECEPEAKRLKVEEPMGAEAEVDCRQW
 TQHHLVAADIRVAPAMALTPPQGDADADGMDVNVVRGPDGFTPLMLASF CGGALEPMPTEEDEADTSASI
 ISDLICQGAQLGARTDRTGETALHLAARYARADAAKRLLDAGADTNAQDHSGRTPLHTAVTADAQGVFQI
 LIRNRSTDL DARMADGSTALIL AARLAVEGMVEELIASHADVNAVDELGKSALHWA AVNNVEATLALLK
 NGANKDMQDSKEETPLFLAAREGSYEA AKLLL DHFANREITDHLDRLP RDVAQERLHQDIVRLLDQPSGP
 RSPPGPHGLPGLLCPGFAFLPGLKAAQSGSKSRPPGKAGLGPQGRGRGKCLTACPGPLADSSVTL S
 PVDSLDSRPFPGPPASPGGFLEGPYAAATATAVSLAQLGGPGRAGLGRQPPGGCVLSLGLLNPVAVPL
 DWARLPPPAPPGPSFLLPLAPGQQLLNPGTVPSPQERPPPYLAVPGHGEEYPAAGAHSSPPKARFLRVPS
 EHPYLTPSPESPEHWASPPSLSDWSESTPSPATATGAMATTTGALPAQPLPLSVPSLAQAQTQLGPQ
 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]