

Product datasheet for **RC402089**

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:	C183F
Affected Codon#:	183
Affected NT#:	548
Nucleotide Mutation:	NOTCH3 Mutant (C183F), 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:	>RC402089 representing NM_000435 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCCGGGGCCCGTGGCCGCCGCCCGCCGTCGCCGATGTCGCCGCCACCGCCACCGCCACCCG
TGCGGGCGCTGCCCTGCTGCTGCTGCTAGCGGGCCGGGGGCTGCAGCCCCCTTGCTGGACGGAAG
CCCGTGTGCAAATGGAGGTCGTTGCACCCAGCTGCCCTCCCGGGAGGCTGCCTGCCTGTGCCCGCTGGC
TGGGTGGGTGAGCGGTGTCAGCTGGAGGACCCCTGCTCACTCAGGCCCTGTGCTGGCCGTGGTGTCTGCC
AGAGTTCAGTGGTGGCTGGCACCGCCGATTCTCATGCCGGTGCCCCGTGGCTCCGAGGCCCTGACTG
CTCCCTGCCAGATCCCTGCCTCAGCAGCCCTTGTGCCACGGTGCCCGCTGCTCAGTGGGGCCCGATGGA
CGTTCCTCTGCTCCTGCCACCTGGTACCAGGGCCGACGCTGCCGAAGCGACGTGGATGAGTGCCGGG



[View online »](#)

TGGGTGAGCCCTGCCGCATGGTGGCACCTGCCTCAACACACCTGGCTCCTCCGCTTCCAGTGTCCAGC
TGGCTACACAGGGCCACTATGTGAGAACCCCGCGGTGCCCTGTGCACCCTCACCATGCCGTAACGGGGG
ACCTGCAGGCAGAGTGGCGACCTCACTACGACTGTGCCTGTCTTCTGGGTTTGGGGTTCAGAAATTGTG
AAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAATGGGGGACATGCGTGGATGGCGTCAACAC
CTAACTGCCAGTGCCTCCTGAGTGGACAGGCCAGTTCGCACGGAGGACGTGGATGAGTGTGAGTGTG
CAGCCCAACGCCTGCCACAATGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGCTGCGTGTGTGTCA
ATGGCTGGACAGGCGAGAGCTGCAGTCAGAATATCGATGACTGTGCCACAGCCGTGCTTCCATGGGGC
CACCTGCCATGACCGCGTGGCTTCTTTCTACTGTGCCTGCCCATGGGCAAGACTGGCCTCCTGTGTAC
CTGGATGACGCCTGTGTGAGCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGC
GGGCCATTTGCACCTGTCTCCCGGCTTACGGGTGGGCATGTGACCAGGATGTGGACGAGTGTCTAT
CGGCGCAACCCCTGCGAGCACTGGGCAGGTGCGTGAACACGCAGGGCTCCTTCTGTGCCAGTGTGGT
CGTGGCTACACTGGACCTCGCTGTGAGACCGATGTCAACGAGTGTCTGTGCGGGCCCTGCCGAAACAGG
CCACGTGCCTCGACCGCATAGGCCAGTTCACCTGTATCTGTATGGCAGGCTTACAGGAACCTATTGCGA
GGTGGACATTGACGAGTGTGAGTAGCCCTGTGTCAACGGTGGGTCTGCAAGGACCGAGTCAATGGC
TTCAGTGCACCTGCCCTCGGGCTTACAGCGCTCCACGTGTGAGCTGGACGTGGACGAATGCGCCAGCA
CGCCCTGCAGGAATGGCGCAAAATGCGTGGACAGCCCGATGGCTACGAGTGGCCTGTGCCGAGGGCTT
TGAGGGCACGCTGTGTGATCGCAACGTGGACGACTGCTCCCTGACCCATGCCACCATGGTGTGCGTGTG
GATGGCATCGCCAGCTTCTCATGTGCCTGTGCTCCTGGCTACACGGGCACACGCTGCGAGAGCCAGGTGG
ACGAATGCCCGACCCAGCCCTGCCGCCATGGCGGCAAAATGCCTAGACCTGGTGGACAAGTACCTGTGCC
CTGCCCTTCTGGGACCACAGGTGGAATGCGAAGTGAACATTGACGACTGTGCCAGCAACCCCTGCACC
TTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCTGGCTTACAGGGCCCTTT
GTAACGTGGAGATCAATGAGTGTGCTTCCAGCCATGCGGCGAGGGAGGTTCTGTGTGGATGGGAAAA
TGCTTCCGCTGCCTTGCCTCGCTGGCTCCTTGCCTCCTGCTCCTGCTCCTGCTCCTGCTCCTGCTCCT
CATGAGCCCTGCAGTCACGGCATCTGCTATGATGCACCTGGCGGGTCCGCTGTGTGTGAGCCTGGCT
GGAGTGGCCCCGCTGCAGCCAGAGCCTGGCCCCGAGACGCTGTGAGTCCCAGCCGTGCAGGGCCGGTGG
GACATGCAGCAGCGATGGAATGGGTTTCCACTGCACCTGCCCGCCTGGTGTCCAGGGACGTGAGTGTGAA
CTCCTCTCCCCCTGCACCCGAACCCCTGTGAGCATGGGGCCGCTGCGAGTCTGCCCTGGCCAGCTGC
CTGTCTGCTCCTGCCCCAGGGCTGGCAAGGCCACGATGCCAGCAGGATGTGGACGAGTGTGCTGGCC
CGCACCTGTGGCCCTCATGGTATCTGCACCACTGGCAGGGAGTTTCCAGTGCACCTGCCATGGAGGG
TACACTGGCCCTTCTGCGATCAGGACATCAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGT
GCCAAGACGGCGTGGCTCCTTTTCTGCTCCTGCCTCCTGGTTTCGCCGGCCACGATGCGCCCGCA
TGTGGATGAGTGCCTGAGCAACCCCTGCGGCCCGGGCACCTGTACCGACCACGTGGCCTCCTTACCTGC
ACCTGCCCGCCAGGCTACGGAGGCTTCCACTGCGAACAGGACCTGCCCGACTGCAGCCCCAGCTCCTGCT
TCAATGGCGGGACCTGTGTGGACGGCGTGAACCTCGTTCAGCTGCCTGTGCCGTCCCGGCTACACAGGAGC
CCACTGCCAACATGAGGCAGACCCCTGCCTCTCGCGCCCTGCCTACACGGGGCGTCTGACGCGCCGCC
CACCTGGCTTCCGCTGCACCTGCCTCGAGAGCTTACGGGCCCGCAGTGCAGACGCTGGTGGATTGGT
GCAGCCGCCAGCCTTGTCAAACGGGGTGCCTGCGTCCAGACTGGGGCTATTGCCCTTGTCCCCTGG
ATGGAGCGGACGCTTGTGACATCCGAAGCTTGCCTGCAGGGAGGCCGAGCCAGATCGGGGTGCGG
CTGGAGCAGCTGTGTGAGCGGGTGGCAGTGTGTGGATGAAGACAGCTCCCACTACTGCGTGTGCCAG
AGGGCCGTAAGTGGTACCCACTGTGAGCAGGAGGTGGACCCTGCTTGGCCAGCCCTGCCAGCATGGGGG
GACCTGCCGTGGCTATATGGGGGCTACATGTGTGAGTGTCTTCTGGCTACAATGGTGATAACTGTGAG
GACGAGTGGACGAGTGTGCCTCCAGCCCTGCCAGCACGGGGTTTATGCATTGACCTCGTGGCCCGCT
ATCTCTGCTCCTGTCCCCAGGAACGCTGGGGTGTCTGCGAGATTAATGAGGATGACTGCGGCCAGG
CCCACCGCTGGACTAGGGCCCCGGTGCCTACACAATGGCACCTGCGTGGACCTGGTGGTGGTTTCCGC
TGCACCTGTCCCCAGGATACACTGGTTTGCCTGCGAGGCAGACATCAATGAGTGTGCTCAGTGCCT
GCCACGCGGCACACCCGGGACTGCCTGCAGGACCCAGGCGGAGGTTTCCGTTGCCCTTGTGATGCTGG
CTTCTCAGGCTCCTGCTGTGAGTGTCTGCTCCTGCGAGTCCCAGCATGCCAGCATGGAGGCCAG
TGCCGTCTAGCCCGGTCTGGGGTGGGCTGACCTTACCTGTCACTGTGCCAGCCGTTCTGGGGT
CGCGTTGCGAGCGGGTGGCGGCTCCTGCCGGGAGCTGCAGTGCCCGGTGGGCGTCCCATGCCAGCAGAC
GCCCGCGGGCCGCGCTGCGCCTGCCCCAGGGTTGTGCGGACCCTCCTGCCGAGCTTCCCGGGTGC
CCGCGGGGGCCAGCAACGCCAGCTGCGCGGCCCCCTGTCTCCAGGGGGCTCCTGCCGCCCGCGC
CGCTCGCGCCCTTCTCCGCTGCGCTTGCGCGCAGGGCTGGACCAGGGCCGCGCTGCGAGGCGCCCGCCG

GGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCCGCTGCCAGGCCAAGCGCGGGGACCAGCGC
 TGCGACCCGAGTGCAACAGCCAGGCTGCGGCTGGGACGGCGGCGACTGCTCGTGAGCGTGGGCGACC
 CCTGGCGGCAATGCGAGGCGCTGCAGTGTGGCGCTCTTCAACAACAGCCGCTGCGACCCCGCTGCAG
 CTCGCCCGCTGCCTCTACGACAACCTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTGAACCCGGTG
 TACGAGAAGTACTGCGCCGACCACTTTCGCCACGGCCGCTGCGACCAGGGCTGCAACACGGAGGAGTGCG
 GCTGGGATGGGCTGGATTGTGCCAGCGAGGTCCCGCCCTGCTGGCCCGCGCGTGTGGTGTCTCACAGT
 GCTGTGCCGCCAGAGGACTACTGCTTCCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCTGCGC
 ACCTCGCTGCGCTTCCGCTGGACGCGCACGGCCAGGCCATGGTCTTCCCTTACCACCGCCTAGTCCTG
 GCTCCGAACCCCGGGCCCGTCCGGAGCTGGCCCCGAGGTGATCGGCTCGGTAGTAATGCTGGAGATTGA
 CAACCGCTCTGCCTGCAGTGCCTGAGAATGATCACTGCTTCCCGATGCCAGAGCGCCGCTGACTAC
 CTGGGAGCGTTGTGAGCGGTGGAGCGCTGGACTTCCCGTACCCACTGCGGGACGTGCGGGGGAGCCGC
 TGGAGCCTCCAGAACCAGCGTCCCGTGTGCCACTGCTAGTGGCGGGCGTGTCTGTGTGGTGTGAT
 TCTCGTCTGGGTGTGATGGTGGCCCGCGCAAGCGGAGCACAGCACCCCTGTGGTCCCTGAGGGCTTC
 TCACTGCACAAGGACGTGGCCTCTGGTACAAGGGCCGGCGGAAACCCGTGGCCAGGACGCGTGGGCA
 TGAAGAACATGGCCAAGGGTGAAGCCTGATGGGGAGGTGGCCACAGACTGGATGGACACAGAGTGCC
 AGAGGCCAAGCGCTAAAGGTAGAGGAGCCAGGCATGGGGCTGAGGAGGCTGTGGATTCCGCTCAGTGG
 ACTCAACACCATCTGGTGTGTGACTCCCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCG
 ACGCAGATGCTGATGGCATGGATGTCAATGTGCGTGGCCAGATGGTTCACCCCGCTAATGCTGGCTTC
 CTTCTGTGGGGGGCTCTGGAGCCAATGCCAATGAAGAGGATGAGGCAGATGACACATCAGTACATC
 ATCTCCGACCTGATCTGCCAGGGGGCTCAGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTC
 ACCTGGCTGCCGTTATGCCCGTGTGATGCAGCCAAGCGGCTGCTGGATGCTGGGGCAGACCAATGC
 CCAGGACCACTCAGGCCGCACTCCCTGCACACAGCTGTCACAGCCGATGCCAGGGTGTCTTCCAGATT
 CTCATCCGAAACCGCTTACAGACTTGGATGCCCGCATGGCAGATGGCTCAACGGCACTGATCTGGCG
 CCGCCTGGCAGTAGAGGGCATGGTGAAGAGCTCATGCCAGCCATGCTGATGTAATGCTGTGGATGA
 GCTTGGGAAATCAGCCTTACACTGGGCTGCGGCTGTGAACAACGTGGAAGCCACTTTGGCCCTGTCAA
 AATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGGAGACCCCTATTCTGGCCGCCGCGAGGGCA
 GCTATGAGGCTGCCAAGCTGCTGTTGGACCACTTTGCCAACCGTGAATCACCAGCACCTGGACAGGCT
 GCCCGGGGACGTAGCCAGGAGAGACTGCACCAGGACATCGTGCCTTGTGGATCAACCAGTGGGCC
 CGCAGCCCCCGGTCCACAGGCTGGGGCTCTGCTGTCTCCAGGGCCCTTCTCCCTGGCCTCA
 AAGCGCACAGTCGGGGTCCAAGAAGAGCAGGAGGCCCGGGAAGCGGGGCTGGGGCCGAGGGCC
 CCGGGGCGGGCAAGAAGCTGACGCTGGCCTGCCGGGCCCTGGCTGACAGCTCGGTACGCTGTGCG
 CCGTGGACTCGCTGGACTCCCCGCGGCTTTCGGTGGGCCCTGCTTCCCTGGTGGCTTCCCTTG
 AGGGGCCATGACAGTGCCTGCACTGCACTGCACTGCACTGCTCTGGCACAGTGGTGGCCAGGCCGGGCGG
 TCTAGGGCGCCAGCCCCCTGGAGGATGTGACTCAGCCTGGGCTGCTGAACCTGTGGCTGTGCCCTC
 GATTGGGCCCGGCTGCCCCACCTGCCCTCCAGGCCCTCGTTCCTGCTGCCACTGGCGCCGGGACCC
 AGCTGTCAACCCAGGGACCCCGTCTCCCGCAGGAGCGGCCCGCTTACCTGGCAGTCCCAGGACA
 TGGCGAGGAGTACCCGGCGGCTGGGGCACACAGCAGCCCCCAAGGCCCGCTTCTGCGGGTCCCAGT
 GAGCACCTTACCTGACCCATCCCCGAATCCCCTGAGCACTGGGCCAGCCCCACCTCCCTCCCTCT
 CAGACTGGTCCGAATCCAGCCTAGCCAGCCACTGCCACTGGGGCCATGGCCACCACCCTGGGGCACT
 GCCTGCCAGCCACTTCCCTGTCTGTTCCAGCTCCCTGCTCAGGCCAGACCAGCTGGGGCCCCAG
 CCGGAAGTTACCCCAAGAGGCAAGTGTGGCC

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGTTTAA

Protein Sequence: >RC402089 representing NM_000435
 Red=Cloning site Green=Tags(s)

MGPGARRRRRRRPMSPPPPPPVRLPLLLLLAGPGAAAPPCLDGGSPCANGGRCTQLPSREAACLPPG
 WVGERCQLEDPCSHGSPCAGRVCQSSVAVGTARFSCRCPRGFRGPDCSLPDPCLSSPCAHGARCSVGPDG
 RFLCSCPPGYQGRSCRSDVDECRVGEPCRHGGTCLNTPGSRFQCPAGYTGPLCENPAVPCAPSPCRNGG
 TCRQSGDLTYDCACLPGFEGQNCENVVDDCPGHRCLNGGTCTVDGVNTYNCQCPPEWTGQFCTEDVDECQL
 QPNACHNGGTCFNTLGGHSCVCVNGWTGESCSQNIDDCATAVCFHGATCHDRVASFYCACPMGKTGLLCH
 LDDACVSNPCHEDAICDTPVNGRAICTCPPGFTGGACDQDVDECSIGANPCEHLGRCVNTQGSFLCQCG
 RGYTGPRCETDVNECLSGPCRQATCLDRIGQFTICIMAGFTGTyceVDIDECQSSPCVNGGVCKDRVNG
 FSCTCPSGFSGSTCQLDVDECASTPCRNGAKCVDQPDGYECRAEGFEGTLCDRNVDSCDPDCHHGRCV
 DGIASFSCACAPGYTGTRCESQVDECRSQPCRHHGKCLDLVDKYLRCRPSGTTGVNCEVNIDDCASNPCT
 FGVCRDGINRYDCVCQPGFTGPLCNVEINECASSPCGEGGSCVDGENFRCLCPPGSLPPLCLPPSHPCA
 HEPCHSHGICYDAPGGFRVCPEPWSGPRCSQSLARDACESQPCRAGGTCSSDGMGFHCTCPPGVQGRQCE
 LLSPCTPNPCEHGRCESAPGQLPVCSCPQGWQPRCQDQVDECAGPAPCGPHGICTNLAGFSCTCHGG
 YTGPSCDQDINDCDPNPCLNGGSCQDGVGSFSCSCLPGFAGPRCARDVDECLSNPCGPGTCTDHVASFTC
 TCPPGYGGFHCEQDLPDCSPSSCFNGGTCTVDGVNSFSCLCRPGYTGHAHCQHEADPCLSRPCLHGGVCSAA
 HPGFRCTCLESFTGPQCQTLVDWCSRQCQNGGRCVQTGAYCLCPPGWSGRLCDIRSLPCREAAAQIGVR
 LEQLCQAGGQCVEDESSHYCVCEPGRGTSHEQEVDPCLAQPCQHGGRGCRGMYGGYMCECLPGYNGDNCE
 DDVDECASQPCQHGGSIDL VARYLCSCPPGTGLVLCINEDDCGPGPPLDSGPRCLHNGTCDVLDVGGFR
 CTCPPGYTGLRCEADINECRSGACHAAHTRDCLQDPGGGFRCLCHAGFSGPRCQTVLSPCESQPCQHGQ
 CRPSPGPGGGLTFTCHCAQPFWGPRCERVARSCRELQCPVGVPCQQTTPRGPRCACPPGLSGPSCRSPFGS
 PPGASNASCAAAPCLHGGSCRPAPLAPFFRCACAQGWTPRCEAPAAAPEVSEEPRCRAACQAKRGDQR
 CDRECNSPGCGWDGGDCSLSVGDPWRQCEALQCWRLFNNRCDPACSSPAclyDNFDCHAGGRERTCNV
 YEKYCADHFADGRCDQGCNTEECGWDLDCASEVPALLARGVLLVTVLLPPEELLRSSADFLQRLSAILR
 TSLRFRLDAHQAAMVFPYHRPSPGSEPRARRELAPEVIGSVVMLEIDNRLCLQSPENDHCFDAQSAADY
 LGALSAVERLDFPYPLRDVRGELEPEPSVPLPLLVAGAVLLLVLVLMVARRKREHSTLWFPEGF
 SLHKDVASGHKGRREPVGQDALGMKNMAKGESLMGEVATDWMTECEPEAKRLKVEEPMGAEAAVDCRQW
 TQHHLVAADIRVAPAMALTPPQGDADADGMDVNVVRGPDGFTPLMLASFCCGGALEPMPTEEDEADTSASI
 ISDLICQGAQLGARTDRTGETALHLAARYARADAAKRLLDAGADTNAQDHSGRTPLHTAVTADAQGVFQI
 LIRNRSTDL DARMADGSTALILAAARLAVEGMVEELIASHADVNAVDELGKSALHWA AVNNVEATLALLK
 NGANKDMQDSKEETPLFLAAREGSYEA AKLLLDFANREITDHLDRLPDVAQERLHQDIVRLLDQPSGP
 RSPPGPHGLPGLLCPGFAFLPGLKAAQSGSKSRPPGKAGLGPQGRGRGKLLTACPGPLADSSVTL S
 PVDSLDSRPFPGPPASPGGFLEGPYAAATATAVSLAQLGGPGRAGLGRQPPGGCVLSLGLLNPVAVPL
 DWARLPPAPPGPSFLLPLAPGQQLLNPGTVPSPQERPPPYLAVPGHGEEYPAAGAHSSPPKARFLRVPS
 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]