

Product datasheet for **RC402104**

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:	C212S
Affected Codon#:	212
Affected NT#:	634
Nucleotide Mutation:	NOTCH3 Mutant (C212S), 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:	>RC402104 representing NM_000435 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCCGGGGCCCGTGGCCGCCGCCCGCCGTCGCCGATGTCGCCGCCACCGCCACCGCCACCCG
TGCGGGCGCTGCCCTGCTGCTGCTGCTAGCGGGCCGGGGGTGCAGCCCCCTTGCTGGACGGAAG
CCCGTGTGCAAATGGAGGTCGTTGCACCCAGCTGCCCTCCGGGAGGCTGCCTGCCTGTGCCCGCTGGC
TGGGTGGGTGAGCGGTGTCAGCTGGAGGACCCCTGCTCACTCAGGCCCTGTGCTGGCCGTGGTGTCTGCC
AGAGTTCAGTGGTGGCTGGCACCGCCGATTCTCATGCCGTTGCCCGTGGCTCCGAGGCCCTGACTG
CTCCCTGCCAGATCCCTGCCTCAGCAGCCCTTGTGCCACGGTGCCCGCTGCTCAGTGGGGCCCGATGGA
CGTTCCTCTGCTCCTGCCACCTGGTACCAGGGCCGACGCTGCCGAAGCGACGTGGATGAGTGCCGGG



[View online »](#)

TGGGTGAGCCCTGCCGCCATGGTGGCACCTGCCTCAACACACCTGGCTCCTTCCGCTGCCAGTGTCCAGC
TGGCTACACAGGGCCACTATGTGAGAACCCCGCGGTGCCCTGTGCACCCTCACCATGCCGTAACGGGGGC
ACCAGCAGGCAGAGTGGCGACCTCACTTACGACTGTGCCTGTCTTCTGGGTTTGAGGGTCAGAAATTGTG
AAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAATGGGGGACATGCGTGGATGGCGTCAACAC
CTAACTGCCAGTGCCTCCTGAGTGGACAGGCCAGTTCGCACGGAGGACGTGGATGAGTGTGAGTGTG
CAGCCCAACGCCTGCCACAATGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGCTGCGTGTGTGTCA
ATGGCTGGACAGGCGAGAGCTGCAGTCAGAATATCGATGACTGTGCCACAGCCGTGCTTCCATGGGGC
CACCTGCCATGACCGCGTGGCTTCTTTCTACTGTGCCTGCCCATGGGCAAGACTGGCCTCCTGTGTAC
CTGGATGACGCCTGTGTGAGCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGCC
GGGCCATTTGCACCTGTCTCCCGGCTTACGGGTGGGGCATGTGACCAGGATGTGGACGAGTGTCTAT
CGGCGCAACCCCTGCGAGCACTGGGCAGGTGCGTGAACACGCAGGGCTCCTTCTGTGCCAGTGTGGT
CGTGGCTACACTGGACCTCGCTGTGAGACCGATGTCAACGAGTGTCTGTGCGGGCCCTGCCGAAACCAGG
CCACGTGCCTCGACCGCATAGGCCAGTTCACCTGTATCTGTATGGCAGGCTTACAGGAACCTATTGCGA
GGTGGACATTGACGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
TTCAGTGCACCTGCCCTCGGGCTTACAGCGCTCCACGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
CGCCCTGCAGGAATGGCGCAAAATGCGTGGACAGCCCGATGGCTACGAGTGCCTGCTGCGCGAGGGCTT
TGAGGGCACGCTGTGTGATCGCAACGTGGACGACTGCTCCCTGACCCATGCCACCATGGTGTGCGTGTG
GATGGCATCGCCAGCTTCTCATGTGCTGTGCTCCTGGCTACACGGGCACACGCTGCGAGAGCCAGGTGG
ACGAATGCCCGACCCAGCCCTGCCGCCATGGCGGCAAAATGCCTAGACCTGGTGGACAAGTACCTGTGCC
CTGCCCTTCTGGGACCACAGGTGGAATGCGAAGTGAACATTGACGACTGTGCCAGCAACCCCTGCACC
TTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCTGGCTTACAGGGCCCTTT
GTAACGTGGAGATCAATGAGTGTGCTTCCAGCCATGCGGCGAGGGAGGTTCTGTGTGGATGGGAAAA
TGCTTCCGCTGCCTTGCCTCGCTGGCTCCTTGCCTCCTGCTCCTGCTCCTGCTCCTGCTCCTGCTCCTG
CATGAGCCCTGCAGTCACGGCATCTGCTATGATGCACCTGGCGGGTCCGCTGTGTGTGAGCCTGGCT
GGAGTGGCCCCGCTGCAGCCAGAGCCTGGCCCCGAGACGCTGTGAGTCCCAGCCGTGCAGGGCCGGTGG
GACATGCAGCAGCGATGGAATGGGTTTCCACTGCACCTGCCCGCCTGGTGTCCAGGGACGTGAGTGTGAA
CTCCTCTCCCCCTGCACCCGAACCCCTGTGAGCATGGGGCCGCTGCGAGTCTGCCCTGGCCAGCTGC
CTGTCTGCTCCTGCCCCAGGGCTGGCAAGGCCACGATGCCAGCAGGATGTGGACGAGTGTGCTGGCCC
CGCACCCTGTGGCCCTCATGGTATCTGCACCAACCTGGCAGGGAGTTTCCAGTGCACCTGCCATGGAGGG
TACACTGGCCCTTCTGCGATCAGGACATCAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGT
GCCAAGACGGCGTGGGCTCCTTTCTGCTCCTGCCTCCTGGTTTCGCCGGCCACGATGCGCCCGCA
TGTGGATGAGTGCCTGAGCAACCCCTGCGGCCCGGGCACCTGTACCGACCACGTGGCCTCCTTACCTGC
ACCTGCCCGCCAGGCTACGGAGGCTTCCACTGCGAACAGGACCTGCCCGACTGCAGCCCCAGCTCCTGCT
TCAATGGCGGGACCTGTGTGGACGGCGTGAACCTCGTTCAGCTGCCTGTGCGCTCCCGGCTACACAGGAGC
CCACTGCCAACATGAGGCAGACCCCTGCCTCTCGCGCCCTGCCTACACGGGGGGCGTCTGACGCGCCGC
CACCTGGCTTCCGCTGCACCTGCCTCGAGAGCTTACGGGCCCGCAGTGCCAGACGCTGGTGGATTGGT
GCAGCCGCCAGCCTTGTCAAACGGGGGTGCTGCGTCCAGACTGGGGCTATTGCCCTTGTCCCCTGG
ATGGAGCGGACGCTTGTGACATCCGAAGCTTGCCTGCAGGGAGGCCGAGCCAGATCGGGGTGCGG
CTGGAGCAGCTGTGTGAGCGGGTGGGACGTGTGGATGAAGACAGCTCCCACTACTGCGTGTGCCAG
AGGGCCGTAAGTGGTACCCACTGTGAGCAGGAGGTGGACCCTGCTTGGCCAGCCCTGCCAGCATGGGGG
GACCTGCCGTGGCTATATGGGGGCTACATGTGTGAGTGTCTTCTGGTACAATGGTGATAACTGTGAG
GACGAGTGGACGAGTGTGCTCCAGCCCTGCCAGCACGGGGTTTATGCATTGACCTCGTGGCCCGCT
ATCTCTGCTCCTGTCCCCAGGAACGCTGGGGTGTCTGCGAGATTAATGAGGATGACTGCGGCCCAGG
CCCACCCTGGACTCAGGGCCCCGCTGCTACACAATGGCACCTGCGTGGACCTGGTGGTGGTTTCCGC
TGCACCTGTCCCCAGGATACACTGGTTTGCCTGCGAGGCAGACATCAATGAGTGTGCTCAGTGCCT
GCCACGCGGCACACCCGGGACTGCCTGCAGGACCCAGGCGGAGGTTTCCGTTGCCCTTGTGATGCTGG
CTTCTCAGGCTCCTGCTGTGAGTGTGCTGCTCCTGCGAGTCCCAGCATGCCAGCATGGAGGCCAG
TGCCGCTTAGCCCGGTCTGGGGTGGGCTGACCTTACCTGTCACTGTGCCAGCCGTTCTGGGGTCT
CGCGTTGCGAGCGGGTGGCGGCTCCTGCCGGGAGCTGCAGTGCCTGGTGGGCGTCCCATGCCAGCAGAC
GCCCGCGGGCCGCGCTGCGCCTGCCCCCCAGGGTTGTGCGGACCCTCCTGCCGAGCTTCCCGGGTGC
CCGCGGGGGCCAGCAACGCCAGCTGCGCGGCCCCCTGTCTCCACGGGGGCTCCTGCCGCCCGCGC
CGCTCGCGCCCTTCTCCGCTGCGCTTGCAGCAGGGCTGGACCAGGGCCGCGCTGCGAGGCGCCCGCCG

GGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCCGCCTGCCAGGCCAAGCGCGGGGACCAGCGC
 TGCGACCCGAGTGCAACAGCCCAGGCTGCGGCTGGGACGGCGGCGACTGCTCGTGAGCGTGGGCGACC
 CCTGGCGGCAATGCGAGGCGCTGCAGTGTGGCGCCTTTCAACAACAGCCGCTGCGACCCCGCCTGCAG
 CTCGCCCGCTGCCTCTACGACAACCTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTGAACCCGGTG
 TACGAGAAGTACTGCGCCGACCACTTTGCCAGCGGCGCTGCGACCAGGGCTGCAACACGGAGGAGTGCG
 GCTGGGATGGGCTGGATTGTGCCAGCGAGGTCCCGCCCTGCTGGCCCGCGCGTGTGGTGTCTCACAGT
 GCTGTGCCGCCAGAGGACTACTGCTTCCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCTGCGC
 ACCTCGTGGCGTTCGCGCTGGACGCGCACGGCCAGGCCATGGTCTTCCCTTACCACCGCCTAGTCCTG
 GCTCCGAACCCCGGGCCCGTCCGGAGCTGGCCCCGAGGTGATCGGCTCGGTAGTAATGTGGAGATTGA
 CAACCGGCTCTGCCTGCAGTCGCTGAGAATGATCACTGCTTCCCGATGCCAGAGCGCCGCTGACTAC
 CTGGGAGCGTTGTGAGCGGTGGAGCGCTGGACTTCCCGTACCCACTGCGGGAGCTGCGGGGGGAGCCGC
 TGGAGCCTCCAGAACCAGCGTCCCGTGTGCCACTGCTAGTGGCGGGCGTGTCTGTGTGGTGTGAT
 TCTCGTCTGGGTGTGATGGTGGCCCGCGCAAGCGGAGCACAGCACCCCTGTGGTTCCTGAGGGCTTC
 TCACTGCACAAGGACGTGGCCTCTGGTACAAGGGCCGGCGGAAACCCGTGGGCCAGGACGCGTGGGCA
 TGAAGAACATGGCCAAGGGTGAAGCCTGATGGGGAGGTGGCCACAGACTGGATGGACACAGAGTGCC
 AGAGGCCAAGCGCTAAAGGTAGAGGAGCCAGGCATGGGGCTGAGGAGGCTGTGGATTCCGCTCAGTGG
 ACTCAACACCATCTGGTGTGTGACTCCGCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCG
 ACGCAGATGCTGATGGCATGGATGTCAATGTGCGTGGCCAGATGGCTTACCCCGCTAATGCTGGCTTC
 CTTCTGTGGGGGGCTCTGGAGCCAATGCCAAGTGAAGAGGATGAGGCAGATGACACATCAGTACATC
 ATCTCCGACCTGATCTGCCAGGGGGCTCAGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTG
 ACCTGGCTGCCGTTATGCCCGTGTGATGCAGCAAGCGGCTGCTGGATGCTGGGGCAGACCAATG
 CCAGGACCACTCAGGCCGCACTCCCTGCACACAGCTGTCACAGCCGATGCCAGGGTGTCTTCCAGATT
 CTCATCCGAAACCGCTTACAGACTTGGATGCCCGCATGGCAGATGGCTCAACGGCACTGATCTGGCG
 CCGCCTGGCAGTAGAGGGCATGGTGAAGAGCTCATGCCAGCCATGCTGATGTAATGCTGTGGATGA
 GCTTGGGAAATCAGCCTTACACTGGGCTGCGGCTGTGAACAACGTGGAAGCCACTTTGGCCCTGTCAA
 AATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGGAGACCCCTATTCTGGCCGCCGCGAGGGCA
 GCTATGAGGCTGCCAAGCTGCTGTTGGACCACTTTGCCAACCGTGAATCACCAGCACCTGGACAGGCT
 GCCCGGGGACGTAGCCAGGAGAGACTGCACCAGGACATCGTGCCTTGTGGATCAACCAGTGGGCC
 CGCAGCCCCCGGTCCACAGGCTGGGGCTCTGCTGTCTCCAGGGCCCTTCTCCCTGGCCTCA
 AAGCGCACAGTCGGGGTCCAAGAAGAGCAGGAGGCCCGGGAAGCGGGGCTGGGGCCGAGGGCC
 CCGGGGCGGGCAAGAAGCTGACGCTGGCCTGCCGGGCCCTGGCTGACAGCTCGGTACGCTGTG
 CCGTGGACTCGTGGACTCCCCGCGCCTTTCGGTGGGCCCTGCTTCCCCTGGTGGCTTCCCCTTG
 AGGGGCCATATGCAGCTGCCACTGCCACTGCAGTGTCTTGGCACAGCTTGGTGGCCAGGCCGGGCGG
 TCTAGGGCGCCAGCCCCCTGGAGGATGTGACTCAGCCTGGGCTGCTGAACCCTGTGGCTGTGCCCTC
 GATTGGGCCCGGCTGCCCCACCTGCCCTCCAGGCCCTCGTTCTGCTGCCACTGGCGCCGGGACCC
 AGCTGTCAACCAGGGACCCCGTCTCCCGCAGGAGCGGCCCGCCTTACCTGGCAGTCCCAGGACA
 TGGCGAGGAGTACCCGGCGGCTGGGGCACACAGCAGCCCCCAAGGCCCGCTTCTGCGGGTCCCAGT
 GAGCACCTTACCTGACCCATCCCCGAATCCCCTGAGCACTGGGCCAGCCCCACCTCCCTCCCTCT
 CAGACTGGTCCGAATCCAGCCTAGCCAGCCACTGCCACTGGGGCCATGGCCACCACCCTGGGGCACT
 GCCTGCCAGCCACTTCCCTGTCTGTTCCAGCTCCCTGCTCAGGCCAGACCAGCTGGGGCCCCAG
 CCGGAAGTTACCCCAAGAGGCAAGTGTGGCC

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGTTTAA

Protein Sequence: >RC402104 representing NM_000435
 Red=Cloning site Green=Tags(s)

MGPGARRRRRRRPMSPPPPPPVRLPLLLLLAGPGAAAPPCLDGGSPCANGGRCTQLPSREAACLPPG
 WVGERCQLEDPCSHGSPCAGRVCQSSVAVGTARFSCRCPRGFRGPDCSLPDPCLSSPCAHGARCSVGPDG
 RFLCSCPPGYQGRSCRSDVDECRVGEPCRHHGTCLNTPGSFRCQCPAGYTGPLCENPAVPCAPSPCRNGG
 TSRQSGDLTYDCACLPGFEGQNCENVVDDCPGHRCLNGGTCTVDGVNTYNCQCPPEWTGQFCTEDVDECQL
 QPNACHNGGTCTFNTLGGHSCVCVNGWTGESCSQNIDDCATAVCFHGATCHDRVASFYCACPMGKTGLLCH
 LDDACVSNPCHEDAICDTPVNGRAICTCPPGFTGGACDQDVDECSIGANPCEHLGRCVNTQGSFLCQCG
 RGYTGPRCETDVNECLSGPCRQATCLDRIGQFTICIMAGFTGTyceVDIDEQSSPCVNGGVCKDRVNG
 FSCTCPSGFSGSTCQLDVDECASTPCRNGAKCVDQPDGYECRAEGFEGTLCDRNVDSCDPDCHHGRCV
 DGIASFSCACAPGYTGTRCESQVDECRSQPCRHHGKCLDLVDKYLRCRPSGTTGVNCEVNIDDCASNPCT
 FGVCRDGINRYDCVCQPGFTGPLCNVEINECASSPCGEGGSCVDGENFRCLCPPGSLPPLCLPPSHPCA
 HEPCHSHGICYDAPGGFRVCPEPWSGPRCSQSLARDACESQPCRAGGTCSSDGMGFHCTCPPGVQGRQCE
 LLSPCTPNPCEHGRCESAPGQLPVCSCPQGWQPRCQDQVDECAGPAPCGPHGICTNLAGFSCTCHGG
 YTGPSCDQDINDCDPNPCLNGGSCQDGVGSFSCSCLPGFAGPRCARDVDECLSNPCGPGTCTDHVASFTC
 TCPPGYGGFHCEQDLPDCSPSSCFNGGTCTVDGVNSFSCLCRPGYTGHAHCQHEADPCLSRPCLHGGVCSAA
 HPGFRCTCLESFTGPQCQTLVDWCSRQCQNGGRCVQTGAYCLCPPGWSGRLCDIRSLPCREAAAQIGVR
 LEQLCQAGGQCQVDESSHYCVCEPGRGTGSHCEQEVDPCAQPCQHGGRGCRGMYGGYMCECLPGYNGDNCE
 DDVDECASQPCQHGGSIDL VARYLCSCPPGTLGVLCEINEDDCGPGPPLDSGPRCLHNGTCDVLDVGGFR
 CTCPPGYTGLRCEADINECRSGACHAAHTRDCLQDPGGGFRCLCHAGFSGPRCQTVLSPCESQPCQHGQ
 CRPSPGPGGGLTFTCHCAQPFWGPRCERVARSCRELQCPVGVPCQQTTPRGPRCACPPGLSGPSCRSPFPG
 PPGASNASCAAAPCLHGGSCRAPLAPFFRCACAQGWTPRCEAPAAAPEVSEEPRCRAACQAKRGDQR
 CDRECNSPGCGWDGGDCSLSVGDPWRQCEALQCWRLFNNRCDPACSSPACLYDNFDCHAGGRERTCNPV
 YEKYCADHFADGRCDQGCNTEECGWDLDCASEVPALLARGVLLTVLLPPEELLRSSADFLQRLSAILR
 TSLRFRLDAHQAAMVFPYHRPSPGSEPRARRELAPEVIGSVVMLEIDNRLCLQSPENDHCFDAQSAADY
 LGALSAVERLDFPYPLRDVRGELEPEPEPSVPLPLLVAGAVLLLVLVLMVARRKREHSTLWFPEGF
 SLHKDVASGHKGRREPVGQDALGMKNMAKGESLMGEVATDWMDECEPEAKRLKVEEPMGAEAAVDCRQW
 TQHHLVAADIRVAPAMALTPPQGDADADGMDVNVVRGPDGFTPLMLASFCCGGALEPMPTEEDEADTSASI
 ISDLICQGAQLGARTDRTGETALHLAARYARADAAKRLLDAGADTNAQDHSGRTPLHTAVTADAQGVFQI
 LIRNRSTDL DARMADGSTALILAAARLAVEGMVEELIASHADVNAVDELGKSALHWAAVNNVEATLALLK
 NGANKDMQDSKEETPLFLAAREGSYEAAKLLLDHFANREITDHLDRLPDVAQERLHQDIVRLLDQPSGP
 RSPPGPHGLPGLLCPGFAFLPGLKAAQSGSKSRPPGKAGLGPQGRGRGKLLTACPGPLADSSVTL
 PVDSLDSRPPFGPPASPGGFLEGPYAAATATAVSLAQLGGPGRAGLGRQPPGGCVLSLGLLNPVAVPL
 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).

Note:

Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

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:	<p>This gene encodes the third discovered human homologue of the <i>Drosophila melanogaster</i> type I membrane protein notch. In <i>Drosophila</i>, 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]</p>