

Product datasheet for **RC402056**

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:	R110C
Affected Codon#:	110
Affected NT#:	328
Nucleotide Mutation:	NOTCH3 Mutant (R110C), 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:	>RC402056 representing NM_000435 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCCGGGGCCCGTGGCCGCCGCCCGCCGTCGCCGATGTCGCCGCCACCGCCACCGCCACCCG
TGCGGGCGCTGCCCTGCTGCTGCTGCTAGCGGGCCGGGGGCTGCAGCCCCCTTGCTGGACGGAAG
CCCGTGTGCAAATGGAGGTCGTTGCACCCAGCTGCCCTCCCGGGAGGCTGCCTGCCTGTGCCCGCTGGC
TGGGTGGGTGAGCGGTGTCAGCTGGAGGACCCCTGCTCACTCAGGCCCTGTGCTGGCCGTGGTGTCTGCC
AGAGTTCAGTGGTGGCTGGCACCGCCGATTCTCATGCCGGTGCCCTGTGGCTCCGAGGCCCTGACTG
CTCCCTGCCAGATCCCTGCCTCAGCAGCCCTTGTGCCACGGTGCCCGCTGCTCAGTGGGGCCCGATGGA
CGTTCTCTGCTCCTGCCACCTGGTACCAGGGCCGACGCTGCCGAAGCGACGTGGATGAGTGCCGGG



[View online »](#)

TGGGTGAGCCCTGCCGCCATGGTGGCACCTGCCTCAACACACCTGGCTCCTCCGCTGCCAGTGTCCAGC
 TGGCTACACAGGGCCACTATGTGAGAACCCCGCGGTGCCCTGTGCACCCTCACCATGCCGTAACGGGGGC
 ACCTGCAGGCAGAGTGGCGACCTCACTTACGACTGTGCCTGTCTTCTGGGTTTGAGGGTCAGAAATTGTG
 AAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAATGGGGGACATGCGTGGATGGCGTCAACAC
 CTAACTGCCAGTGCCTCCTGAGTGGACAGGCCAGTTCGCACGGAGGACGTGGATGAGTGTGAGTGTG
 CAGCCCAACGCCTGCCACAATGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGCTGCGTGTGTGTCA
 ATGGCTGGACAGGCGAGAGCTGCAGTCAGAATATCGATGACTGTGCCACAGCCGTGCTTCCATGGGGC
 CACCTGCCATGACCGCGTGGCTTCTTTCTACTGTGCCTGCCCATGGGCAAGACTGGCCTCCTGTGTAC
 CTGGATGACGCCTGTGTGAGCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGCC
 GGGCCATTTGCACCTGTCTCCCGGCTTACGGGTGGGGCATGTGACCAGGATGTGGACGAGTGTCTAT
 CGGCGCAACCCCTGCGAGCACTTGGGCAGGTGCGTGAACACGCAGGGCTCCTTCTGTGCCAGTGTGCGT
 CGTGGCTACACTGGACCTCGCTGTGAGACCGATGTCAACGAGTGTCTGTGCGGGCCCTGCCGAAACCAGG
 CCACGTGCCTCGACCGCATAGGCCAGTTCACCTGTATCTGTATGGCAGGCTTACAGGAACCTATTGCGA
 GGTGGACATTGACGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
 TTCAGTGCACCTGCCCTCGGGCTTACAGCGCTCCACGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
 CGCCCTGCAGGAATGGCGCAAAATGCGTGGACAGCCGATGGCTACGAGTGGCCTGTGCCGAGGGCTT
 TGAGGGCACGCTGTGTGATCGCAACGTGGACGACTGCTCCCTGACCCATGCCACCATGGTGTGCGTGTG
 GATGGCATCGCCAGCTTCTCATGTGCCTGTGCTCCTGGCTACACGGGCACACGCTGCGAGAGCCAGGTGG
 ACGAATGCCCGACCCAGCCCTGCCGCCATGGCGGCAAAATGCCTAGACCTGGTGGACAAGTACCTGTGCC
 CTGCCCTTCTGGGACCACAGGTGTGAATGCGAAGTGAACATTGACGACTGTGCCAGCAACCCCTGCACC
 TTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCTGGCTTACAGGGCCCTTT
 GTAACGTGGAGATCAATGAGTGTGCTTCCAGCCATGCGGCGAGGGAGGTTCTGTGTGGATGGGAAAA
 TGGCTCCGCTGCCTTGCCTCGCTGGCTCCTTGCCTTCCCTTCCCTTCCCTTCCCTTCCCTTCCCTTCCCT
 CATGAGCCCTGCAGTCACGGCATCTGCTATGATGCACCTGGCGGGTCCGCTGTGTGTGAGCCTGGCT
 GGAGTGGCCCCGCTGCAGCCAGAGCCTGGCCCCGAGACGCTGTGAGTCCCAGCCGTGCAGGGCCGGTGG
 GACATGCAGCAGCGATGGAATGGGTTTCCACTGCACCTGCCCGCCTGGTGTCCAGGGACGTGAGTGTGAA
 CTCCTTCCCCCTGCACCCGAACCCCTGTGAGCATGGGGCCGCTGCGAGTCTGCCCTGGCCAGCTGC
 CTGTCTGCTCCTGCCCCAGGGCTGGCAAGGCCACGATGCCAGCAGGATGTGGACGAGTGTGCTGGCCC
 CGCACCTGTGGCCCTCATGGTATCTGCACCACTGGCAGGGAGTTTCCAGTGCACCTGCCATGGAGGG
 TACACTGGCCCTTCTGCGATCAGGACATCAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGT
 GCCAAGACGGCGTGGGCTCCTTTCTGCTCCTGCCTCCCTGGTTTCGCCGGCCACGATGCGCCCGCA
 TGTGGATGAGTGCCTGAGCAACCCCTGCGGCCCGGGCACCTGTACCGACACAGTGGCCTCCTTACCTGC
 ACCTGCCCGCCAGGCTACGGAGGCTTCCACTGCGAACAGGACCTGCCCGACTGCAGCCCCAGCTCCTGCT
 TCAATGGCGGGACCTGTGTGGACGGCGTGAACCTCGTTCAGCTGCCTGTGCCGTCCCGGCTACACAGGAGC
 CCACTGCCAACATGAGGCAGACCCCTGCCTCTCGCGCCCTGCCTACACGGGGGGCGTCTGACGCGCCGC
 CACCCTGGCTTCCGCTGCACCTGCCTCGAGAGCTTACGGGCCCGCAGTGCAGACGCTGGTGGATTGGT
 GCAGCCGCCAGCCTTGTCAAACGGGGTGCCTGCGTCCAGACTGGGGCTATTGCCCTTGTCCCCTGG
 ATGGAGCGGACGCTTGTGACATCCGAAGCTTGCCTGCAGGGAGGCCGAGCCAGATCGGGGTGCGG
 CTGGAGCAGCTGTGTGAGCGGGTGGGACGTGTGGATGAAGACAGCTCCCACTACTGCGTGTGCCAG
 AGGGCCGTAAGTGGTACCCACTGTGAGCAGGAGGTGGACCCTGCTTGGCCAGCCCTGCCAGCATGGGGG
 GACCTGCCGTGGCTATATGGGGGCTACATGTGTGAGTGTCTTCTGGCTACAATGGTGATAACTGTGAG
 GACGAGTGGACGAGTGTGCCTCCAGCCCTGCCAGCACGGGGTTTATGCATTGACCTCGTGGCCCGCT
 ATCTCTGCTCCTGTCCCCAGGAACGCTGGGGTGTCTGCGAGATTAATGAGGATGACTGCGGCCCAGG
 CCCACCCTGGACTCAGGGCCCCGCTGCCTACACAATGGCACCTGCGTGGACCTGGTGGTGGTTTCCGC
 TGCACCTGTCCCCAGGATACACTGGTTTGCCTGCGAGGCAGACATCAATGAGTGTGCTCAGTGCCT
 GCCACGCGGCACACCCGGGACTGCCTGCAGGACCCAGGCGGAGGTTTCCGTTGCCCTTGTGATGCTGG
 CTTCTCAGGCTCCTGCTGTGAGTGTCTGCTCCTTCCCTGCGAGTCCCAGCATGCCAGCATGGAGGCCAG
 TGCCGCTTAGCCCGGGTCTGGGGTGGGCTGACCTTACCTGTCACTGTGCCAGCCGTTCTGGGGTCT
 CGCGTTGCGAGCGGGTGGCGGCTCCTGCCGGGAGCTGCAGTGGCCGGTGGGCGTCCCATGCCAGCAGAC
 GCCCGCGGGCCGCGCTGCGCCTGCCCCAGGGTGTGCGGACCCCTCCTGCCGAGCTTCCCGGGTGTG
 CCGCGGGGGCCAGCAACGCCAGCTGCGCGGCCCCCTGTCTCCACGGGGGCTCCTGCCGCCCGCGC
 CGCTCGCGCCCTTCTCCGCTGCGCTTGCAGCAGGGCTGGACCGGGCCGCGCTGCGAGGCGCCCGCCG

GGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCCGCCTGCCAGGCCAAGCGCGGGGACCAGCGC
 TGCGACCCGAGTGCAACAGCCAGGCTGCGGCTGGGACGGCGGCGACTGCTCGTGAGCGTGGGCGACC
 CCTGGCGGCAATGCGAGGCGCTGCAGTCTGGCGCCTTTCAACAACAGCCGCTGCGACCCCGCCTGCAG
 CTCGCCCGCTGCCTCTACGACAACCTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTGAACCCGGTG
 TACGAGAAGTACTGCGCCGACCACTTTGCCAGCGGCGCTGCGACCAGGGCTGCAACACGGAGGAGTGCG
 GCTGGGATGGGCTGGATTGTGCCAGCGAGGTCCCGCCCTGCTGGCCCGCGCGTGTGGTGTCTCACAGT
 GCTGTGCCGCCAGAGGAGCTACTGCGTTCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCTGCGC
 ACCTCGCTGCGCTTCCGCTGGACGCGCACGGCCAGGCCATGGTCTTCCCTTACCACCGCCTAGTCCTG
 GCTCCGAACCCCGGGCCCGTCCGGAGCTGGCCCCGAGGTGATCGGCTCGGTAGTAATGCTGGAGATTGA
 CAACCGGCTCTGCCTGCAGTCGCTGAGAATGATCACTGCTTCCCGATGCCAGAGCGCCGCTGACTAC
 CTGGGAGCGTTGTGAGCGGTGGAGCGCTGGACTTCCCGTACCCACTGCGGGACGTGCGGGGGAGCCGC
 TGGAGCCTCCAGAACCAGCGTCCCGTGTGCCACTGCTAGTGGCGGGCGTGTCTGTGCTGGTCAT
 TCTCGTCTGGGTGTATGGTGGCCCGCGCAAGCGGAGCACAGCACCCCTCTGGTTCCTGAGGGCTTC
 TCACTGCACAAGGACGTGGCCTCTGGTACAAGGGCCGGCGGAAACCCGTGGCCAGGACGCGCTGGGCA
 TGAAGAACATGGCCAAGGGTGAAGCCTGATGGGGAGGTGGCCACAGACTGGATGGACACAGAGTGCC
 AGAGGCCAAGCGCTAAAGGTAGAGGAGCCAGGCATGGGGCTGAGGAGGCTGTGGATTCCGCTCAGTGG
 ACTCAACACCATCTGGTGTGCTGACATCCCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCG
 ACGCAGATGCTGATGGCATGGATGTCAATGTGCGTGGCCAGATGGCTTACCCCGCTAATGCTGGCTTC
 CTTCTGTGGGGGGCTCTGGAGCCAATGCCAAGAGGATGAGGCAGATGACACATCAGCTAGCATC
 ATCTCCGACCTGATCTGCCAGGGGGCTCAGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTGC
 ACCTGGCTGCCGTTATGCCCGTGTGATGCAGCAAGCGGCTGCTGGATGCTGGGGCAGACCAATGC
 CCAGGACCACTCAGGCCGCACTCCCTGCACACAGCTGTCACAGCCGATGCCAGGGTGTCTTCCAGATT
 CTCATCCGAAACCGCTTACAGACTTGGATGCCCGCATGGCAGATGGCTCAACGGCACTGATCTGGCG
 CCGCCTGGCAGTAGAGGGCATGGTGAAGAGCTCATGCCAGCCATGCTGATGTAATGCTGTGGATGA
 GCTTGGGAAATCAGCCTTACACTGGGCTGCGGCTGTGAACAACGTGGAAGCCACTTTGGCCCTGTCAA
 AATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGGAGACCCCTATTCTGGCCGCCGCGAGGGCA
 GCTATGAGGCTGCCAAGCTGCTGTTGGACCACTTTGCCAACCGTGAATCACCAGCACCTGGACAGGCT
 GCCCGGGGACGTAGCCAGGAGAGACTGCACCAGGACATCGTGCCTTGTGGATCAACCAGTGGGCC
 CGCAGCCCCCGGTCCACAGGCTGGGGCTCTGCTCTGTCTCCAGGGCCCTTCTCCCTGGCCTCA
 AAGCGCACAGTCGGGGTCCAAGAAGAGCAGGAGGCCCGGGAAGCGGGGCTGGGGCCGAGGGCC
 CCGGGGGCGGGCAAGAAGCTGACGCTGGCCTGCCGGGCCCTGGCTGACAGCTCGGTACGCTGTG
 CCGTGGACTCGCTGGACTCCCCGCGCCTTTCGGTGGGCCCTGCTTCCCCTGGTGGCTTCCCCTTG
 AGGGGCCCTATGCAGCTGCCACTGCCACTGCAGTGTCTTGGCACAGCTTGGTGGCCAGGCCGGGCGG
 TCTAGGGCGCCAGCCCCCTGGAGGATGTGACTCAGCCTGGGCTGCTGAACCTGTGGCTGTGCCCTC
 GATTGGGCCCGGCTGCCCCACCTGCCCTCCAGGCCCTCGTTCTGCTGCCACTGGCGCCGGGACCC
 AGCTGTCAACCCAGGGACCCCGTCTCCCGCAGGAGCGGCCCGCCTTACCTGGCAGTCCCAGGACA
 TGGCGAGGAGTACCCGGCGGCTGGGGCACACAGCAGCCCCCAAGGCCCGCTTCTGCGGGTCCCAGT
 GAGCACCTTACCTGACCCATCCCCGAATCCCCTGAGCACTGGGCCAGCCCCACCTCCCTCCCTCT
 CAGACTGGTCCGAATCCAGCCTAGCCAGCCACTGCCACTGGGGCCATGGCCACCACCCTGGGGCACT
 GCCTGCCAGCCACTTCCCTGTCTGTTCCAGCTCCCTTGTCTAGGCCAGCCAGCTGGGGCCCCAG
 CCGGAAGTTACCCCAAGAGGCAAGTGTGGCC

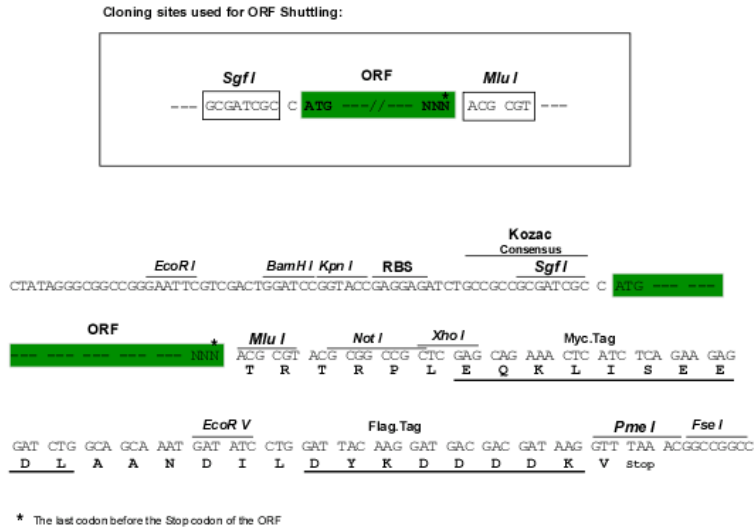
AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGTTTAA

Protein Sequence: >RC402056 representing NM_000435
 Red=Cloning site Green=Tags(s)

MGPGARRRRRRRPMSPPPPPPVRLPLLLLLLAGPGAAAPPCLDGGSPCANGGRCTQLPSREAACLPPG
 WVGERCQLEDPCSHGPCAGRGVCQSSVAGTARFSCRPCGFRGPDCLPDPCLSSPCAHGARCSVGPDG
 RFLCSCPPGYQGRSCRSDVDECRVGEPCRHHGTCLNTPGSFRCQCPAGYTGPLCENPAVPCAPSPCRNGG
 TCRQSGDLTYDCACLPGFEGQNCENVVDDCPGHRCLNGGTCTVDGVNTYNCQCPPEWTGQFCTEDVDECQL
 QPNACHNGGTCFNTLGGHSCVCVNGWTGESCSQNIDDCATAVCFHGATCHDRVASFYCACPMGKTGLLCH
 LDDACVSNPCHEDAICDTPVNGRAICTCPPGFTGGACDQDVDECSIGANPCEHLGRCVNTQGSFLCQCG
 RGYTGPRCETDVNECLSGPCRQATCLDRIGQFTICIMAGFTGTyceVDIDEQSSPCVNGGVCKDRVNG
 FSCTCPSGFSGSTCQLDVDECASTPCRNGAKCVDQPDGYECRAEGFEGTLCDRNVDDCSPDPCHHGRCV
 DGIASFSCACAPGYTGTRCESQVDECRSQPCRHHGKCLDLVDKYLRCRPSGTTGVNCEVNIDDCASNPCT
 FGVCRDGINRYDCVCQPFTGPLCNVEINECASSPCGEGGSCVDGENFRCLCPPGSLPPLCLPPSHPCA
 HEPCHSHGICYDAPGGFRVCPEPWSGPRCSQSLARDACESQPCRAGGTCSSDGMGFHCTCPPGVQGRQCE
 LLSPCTPNPCEHGRCESAPGQLPVCSCPQGWQPRCQDQVDECAGPAPCGPHGICTNLAGFSCTCHGG
 YTGPSCDQDINDCDPNPCLNGGSCQDGVGSFSCSCLPGFAGPRCARDVDECLSNPCGPGTCTDHVASFTC
 TCPPGYGGFHCEQDLPDCSPSSCFNGGTCTVDGVNSFSCLCRPGYTGHAHCQHEADPCLSRPCLHGGVCSAA
 HPGFRCTCLESFTGPQCQTLVDWCSRQPCQNGGRCVQTGAYCLCPPGWSGRLCDIRSLPCREAAAQIGVR
 LEQLCQAGGQCVEDESSHYCVCEPGRGTSHEQEVDPCLAQPCQHGGRGCRGMYGGYMCECLPGYNGDNCE
 DDVDECASQPCQHGGSIDL VARYLCSPPGTLGVLCEINEDDCGPGPPLDSGPRCLHNGTCDVLDVGGFR
 CTCPPGYTGLRCEADINECRSGACHAAHTRDCLQDPGGGFRCLCHAGFSGPRCQTVLSPCESQPCQHGQ
 CRPSPGPGGGLTFTCHCAQPFWGPRCERVARSCRELQCPVGVPCQQTTPRGPRCACPPGLSGPSCRSPFGS
 PPGASNASCAAAPCLHGGSCRPAPLAPFFRCACAQGWTPRCEAPAAAPEVSEEPRCRAACQAKRGDQR
 CDRECNSPGCGWDGGDCSLSVGDPWRQCEALQCWRLFNNRCDPACSSPACLYDNFDCHAGGRERTCNPV
 YEKYCADHFADGRCDQGCNTEECGWDLDCASEVPALLARGVLLVTVLLPPEELLRSSADFLQRLSAILR
 TSLRFRLDAHQAAMVFPYHRPSPGSEPRARRELAPEVIGSVVMLEIDNRLCLQSPENDHCFDAQSAADY
 LGALSAVERLDFPYPLRDVRGELEPEPEPSVPLPLLVAGAVLLLVLVLMVARRKREHSTLWFPEGF
 SLHKDVASGHKGRREPVGQDALGMKNMAKGESLMGEVATDWMDECEPEAKRLKVEEPMGAEAAVDCRQW
 TQHHLVAADIRVAPAMALTPPQGDADADGMDVNVVRGPDGFTPLMLASFCCGGALEPMPTEEDEADTSASI
 ISDLICQGAQLGARTDRTGETALHLAARYARADAAKRLLDAGADTNAQDHSGRTPLHTAVTADAQGVFQI
 LIRNRSTDL DARMADGSTALILAAARLAVEGMVEELIASHADVNAVDELGKSALHWAAVNNVEATLALLK
 NGANKDMQDSKEETPLFLAAREGSYEAAKLLLDHFANREITDHLDRLPDVAQERLHQDIVRLLDQPSGP
 RSPPGPHGLPPLCPPGAFLPGLKAAQSGSKSRPPGKAGLGPQGRGRGKLLTACPGPLADSSVTL
 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]