

Product datasheet for RC402164

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:	R607C
Affected Codon#:	607
Affected NT#:	1819
Nucleotide Mutation:	NOTCH3 Mutant (R607C), 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:	SgfI-MluI
ORF Nucleotide Sequence:	>RC402164 representing NM_000435 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCCGGGGCCCGTGGCCGCCGCCCGCCGTCGCCGATGTCGCCGCCACCGCCACCGCCACCCG
TGCGGGCGCTGCCCTGCTGCTGCTGCTAGCGGGCCGGGGGCTGCAGCCCCCTTGCTGGACGGAAG
CCCGTGTGCAAATGGAGGTCGTTGCACCCAGCTGCCCTCCGGGAGGCTGCCTGCCTGTGCCCGCTGGC
TGGGTGGGTGAGCGGTGTCAGCTGGAGGACCCCTGCTCACTCAGGCCCTGTGCTGGCCGTGGTGTCTGCC
AGAGTTCAGTGGTGGCTGGCACCGCCGATTCTCATGCCGGTGCCCCGTGGCTCCGAGGCCCTGACTG
CTCCCTGCCAGATCCCTGCCTCAGCAGCCCTTGTGCCACGGTGCCCGCTGCTCAGTGGGGCCCGATGGA
CGCTTCTCTGCTCCTGCCACCTGGTACCAGGGCCGACGCTGCCGAAGCGACGTGGATGAGTGCCGGG



[View online »](#)

TGGGTGAGCCCTGCCGCCATGGTGGCACCTGCCTCAACACACCTGGCTCCTCCGCTGCCAGTGTCCAGC
TGGCTACACAGGGCCACTATGTGAGAACCCCGCGGTGCCCTGTGCACCCTCACCATGCCGTAACGGGGGC
ACCTGCAGGCAGAGTGGCGACCTCACTACGACTGTGCCTGTCTTCTGGGTTTGGGGTTCAGAAATTGTG
AAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAATGGGGGACATGCGTGGATGGCGTCAACAC
CTAACTGCCAGTGCCTCCTGAGTGGACAGGCCAGTTCGCACGGAGGACGTGGATGAGTGTGAGTGTG
CAGCCCAACGCCTGCCACAATGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGCTGCGTGTGTGTCA
ATGGCTGGACAGGCGAGAGCTGCAGTCAGAATATCGATGACTGTGCCACAGCCGTGCTTCCATGGGGC
CACCTGCCATGACCGCGTGGCTTCTTTCTACTGTGCCTGCCCATGGGCAAGACTGGCCTCCTGTGTAC
CTGGATGACGCCTGTGTGAGCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGCC
GGGCCATTTGCACCTGTCTCCCGGCTTACGGGTGGGGCATGTGACCAGGATGTGGACGAGTGTCTAT
CGGCGCAACCCCTGCGAGCACTGGGCAGGTGCGTGAACACGCAGGGCTCCTTCTGTGCCAGTGTGGT
CGTGGCTACACTGGACCTCGCTGTGAGACCGATGTCAACGAGTGTCTGTGCGGGCCCTGCCGAAACAGG
CCACGTGCCTCGACCGCATAGGCCAGTTCACCTGTATCTGTATGGCAGGCTTACAGGAACCTATTGCGA
GGTGGACATTGACGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
TTCAGTGCACCTGCCCTCGGGCTTACAGCGCTCCACGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTG
CGCCCTGCAGGAATGGCGCAAAATGCGTGGACAGCCCGATGGCTACGAGTGCCTCCTGTGCCGAGGGCTT
TGAGGGCACGCTGTGTGATCGCAACGTGGACGACTGCTCCCTGACCCATGCCACCATGGTGTGCGTGTG
GATGGCATCGCCAGCTTCTCATGTGCTGTGCTCCTGGCTACACGGGCACACGCTGCGAGAGCCAGGTGG
ACGAATGCCCGACCCAGCCCTGCCGCCATGGCGGCAAAATGCCTAGACCTGGTGGACAAGTACCTGTGCTG
CTGCCCTTCTGGGACCACAGGTGTGAATGCGAAGTGAACATTGACGACTGTGCCAGCAACCCCTGCACC
TTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCTGGCTTACAGGGCCCTTT
GTAACGTGGAGATCAATGAGTGTGCTTCCAGCCATGCGGCGAGGGAGGTTCTGTGTGGATGGGAAAA
TGCTTCCGCTGCCTTCCCGCCTGGCTCCTTCCCGCCACTGCTCCTCCCGGAGCCATCCTGTGCTG
CATGAGCCCTGCAGTCACGGCATCTGCTATGATGCACCTGGCGGGTCCGCTGTGTGTGAGCCTGGCT
GGAGTGGCCCCGCTGCAGCCAGAGCCTGGCCCCGAGACGCTGTGAGTCCCAGCCGTGCAGGGCCGGTGG
GACATGCAGCAGCGATGGAATGGGTTTCCACTGCACCTGCCCGCCTGGTGTCCAGGGACGTGAGTGTGAA
CTCCTTCCCGCTGCACCCGAACCCCTGTGAGCATGGGGCCGCTGCGAGTCTGCCCTGGCCAGCTGC
CTGTCTGCTCCTGCCCCAGGGCTGGCAAGGCCACGATGCCAGCAGGATGTGGACGAGTGTGCTGGCCC
CGCACCTGTGGCCCTCATGGTATCTGCACCACTGGCAGGGAGTTTCCAGTGCACCTGCCATGGAGGG
TACACTGGCCCTTCTGCGATCAGGACATCAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGT
GCCAAGACGGCGTGGGCTCCTTTCTGCTCCTGCCTCCCTGGTTTCGCCGGCCACGATGCGCCCGCA
TGTGGATGAGTGCCTGAGCAACCCCTGCGGCCCGGGCAGCTGTACCGACCACGTGGCCTCCTTACCTGC
ACCTGCCCGCCAGGCTACGGAGGCTTCCACTGCGAACAGGACCTGCCCGACTGCAGCCCCAGCTCCTGCT
TCAATGGCGGGACCTGTGTGGACGGCGTGAACCTCGTTCAGCTGCCTGTGCGCTCCCGGCTACACAGGAGC
CCACTGCCAACATGAGGCAGACCCCTGCCTCTCGCGGCCCTGCCTACACGGGGCGTCTGACGCGCCGCC
CACCTGGCTTCCGCTGCACCTGCCTCGAGAGCTTACGGGCCCGCAGTGCAGACGCTGGTGGATTGGT
GCAGCCGCCAGCCTTGTCAAACGGGGTGCCTGCGTCCAGACTGGGGCTATTGCCCTTGTCCCCTGG
ATGGAGCGGACGCTGTGACATCCGAAGCTTGCCTGCAGGGAGGCCGAGCCAGATCGGGGTGCGG
CTGGAGCAGCTGTGTGAGCGGGTGGCAGTGTGTGGATGAAGACAGCTCCCACTACTGCGTGTGCCAG
AGGGCCGTAAGTGTAGCCACTGTGAGCAGGAGGTGGACCCTGCTTGGCCAGCCCTGCCAGCATGGGGG
GACCTGCCGTGGCTATATGGGGGCTACATGTGTGAGTGTCTTCTGGCTACAATGGTGATAACTGTGAG
GACGAGTGGACGAGTGTGCTCCAGCCCTGCCAGCACGGGGTTTATGCATTGACCTCGTGGCCCGCT
ATCTCTGCTCCTGTCCCCAGGAACGCTGGGGTGTCTGCGAGATTAATGAGGATGACTGCGGCCCAGG
CCCACCGCTGGACTCAGGGCCCCGCTGCTACACAATGGCACCTGCGTGGACCTGGTGGTGGTTTCCGC
TGCACCTGTCCCCAGGATACACTGGTTTGCCTGCGAGGCAGACATCAATGAGTGTGCTCAGTGCCT
GCCACGCGGCACACCCGGGACTGCCTGCAGGACCCAGGCGGAGGTTTCCGTTGCCCTTGTGATGCTGG
CTTCTCAGGCTCCTGCTGTGAGTGTGCTGCTCCTGCGAGTCCCAGCATGCCAGCATGGAGGCCAG
TGCCGCTTAGCCCGGTCTGGGGTGGGCTGACCTTACCTGTCACTGTGCCAGCCGTTCTGGGGTCTC
CGCGTTGCGAGCGGGTGGCGGCTCCTGCCGGGAGCTGCAGTGCCTGGTGGGCGTCCCATGCCAGCAGAC
GCCCGCGGGCCGCGCTGCGCCTGCCCCCCAGGGTGTGCGGACCCCTCCTGCCGAGCTTCCCGGGTGC
CCGCGGGGGCCAGCAACGCCAGCTGCGCGGCCCCCTGTCTCCACGGGGGCTCCTGCCGCCCGCGC
CGCTCGCGCCCTTCTCCGCTGCGCTTGCAGCAGGGCTGGACCGGGCCGCGCTGCGAGGCGCCCGCCG

GGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCCGCCTGCCAGGCCAAGCGCGGGGACCAGCGC
TGCGACCCGAGTGCAACAGCCCAGGCTGCGGCTGGGACGGCGGCGACTGCTCGTGAGCGTGGGCGACC
CCTGGCGGCAATGCGAGGCGCTGCAGTGTGGCGCCTTTCAACAACAGCCGCTGCGACCCCGCCTGCAG
CTCGCCCGCCTGCCTCTACGACAACCTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTGCAACCCGGT
TACGAGAAGTACTGCGCCGACCACTTTGCCAGCGGCGCTGCGACCAGGGCTGCAACACGGAGGAGTGCG
GCTGGGATGGGCTGGATTGTGCCAGCGAGGTCCCGCCCTGCTGGCCCGCGCGTGTGGTGTCTCACAGT
GCTGTGCCGCCAGAGGACTACTGCTTCCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCTCGCGC
ACCTCGCTGCGCTTCCGCTGGACGCGCACGGCCAGGCCATGGTCTTCCCTTACCACCGCCTAGTCCTG
GCTCCGAACCCCGGGCCCGTCCGGAGCTGGCCCGGAGGTGATCGGCTCGGTAGTAATGTGGAGATTGA
CAACCGGCTCTGCCTGCAGTCGCTGAGAATGATCACTGCTTCCCGATGCCAGAGCGCCGCTGACTAC
CTGGGAGCGTTGTGAGCGGTGGAGCGCTGGACTTCCCGTACCCACTGCGGGACGTGCGGGGGAGCCGC
TGGAGCCTCCAGAACCAGCGTCCCGTGTGCCACTGCTAGTGGCGGGCGTGTCTGTGTGGTGTGAT
TCTCGTCTGGGTGTGATGGTGGCCCGCGCAAGCGGAGCACAGCACCCCTGTGGTTCCTGAGGGCTTC
TCACTGCACAAGGACGTGGCCTCTGGTACAAGGGCCGGCGGAAACCCGTGGGCCAGGACGCGTGGCA
TGAAGAACATGGCCAAGGGTGAAGCCTGATGGGGAGGTGGCCACAGACTGGATGGACACAGAGTGCC
AGAGGCCAAGCGCTAAAGGTAGAGGAGCCAGGCATGGGGCTGAGGAGGCTGTGGATTCCGCTCAGTGG
ACTCAACACCATCTGGTGTGTGACTCCGCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCG
ACGAGATGCTGATGGCATGGATGTCAATGTGCGTGGCCAGATGGCTTACCCCGCTAATGCTGGCTTC
CTTCTGTGGGGGGCTCTGGAGCCAATGCCAATGAAGAGGATGAGGCAGATGACACATCAGTACATC
ATCTCCGACCTGATCTGCCAGGGGGCTCAGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTC
ACCTGGCTGCCGTTATGCCCGTGTGATGCAGCAAGCGGCTGCTGGATGCTGGGGCAGACCAATGC
CCAGGACCACTCAGGCCGCACTCCCTGCACACAGCTGTCACAGCCGATGCCAGGGTGTCTTCCAGATT
CTCATCCGAAACCGCTTACAGACTTGGATGCCCGCATGGCAGATGGCTCAACGGCACTGATCTGGCG
CCCGCTGGCAGTAGAGGGCATGGTGAAGAGCTCATGCCAGCCATGCTGATGTAATGCTGTGGATGA
GCTTGGGAAATCAGCCTTACACTGGGCTGCGGCTGTGAACAACGTGGAAGCCACTTTGGCCCTGTCAA
AATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGGAGACCCCTATTCTGGCCGCCGCGAGGGCA
GCTATGAGGCTGCCAAGCTGCTGTTGGACCACTTTGCCAACCGTGAATCACCAGCACCTGGACAGGCT
GCCCGGGGACGTAGCCAGGAGAGACTGCACCAGGACATCGTGCCTTGTGGATCAACCAGTGGGCC
CGCAGCCCCCGGTCCACAGGCTGGGGCTCTGCTGTCTCCAGGGCCCTTCTCCCTGGCCTCA
AAGCGCACAGTCGGGGTCCAAGAAGAGCAGGAGGCCCGGGAAGCGGGGCTGGGGCCGAGGGCC
CCGGGGCGGGCAAGAAGCTGACGCTGGCCTGCCGGGCCCTGGCTGACAGCTCGGTACGCTGTG
CCCGTGGACTCGCTGGACTCCCGCGGCCCTTCCGGTGGGCCCTGCTTCCCTGGTGGCTTCCCTTG
AGGGGCCCTATGCAGCTGCCACTGCCACTGCAGTGTCTTGGCACAGCTTGGTGGCCAGGCCGGCGGG
TCTAGGGCGCCAGCCCCCTGGAGGATGTGACTCAGCCTGGGCTGTGAACCCTGTGGCTGTGCCCTC
GATTGGGCCCGGCTGCCCCACCTGCCCTCCAGGCCCTCGTTCTGTGCCACTGGCGCCGGGACCC
AGCTGTCAACCCAGGGACCCCGTCTCCCGCAGGAGCGGCCCGCCTTACCTGGCAGTCCCAGGACA
TGGCGAGGAGTACCCGGCGGCTGGGGCACACAGCAGCCCCCAAGGCCCGCTTCTGCGGGTCCCAGT
GAGCACCTTACCTGACCCATCCCCGAATCCCCTGAGCACTGGGCCAGCCCCACCTCCCTCCCTCT
CAGACTGGTCCGAATCCAGCCTAGCCAGCCACTGCCACTGGGGCCATGGCCACCACCCTGGGGCACT
GCCTGCCAGCCACTTCCCTGTCTGTTCCAGCTCCCTGCTCAGGCCAGACCAGCTGGGGCCAG
CCGGAAGTTACCCCAAGAGGCAAGTGTGGCC

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGTTTAA

Protein Sequence: >RC402164 representing NM_000435
 Red=Cloning site Green=Tags(s)

MGPGARRRRRRRPMSPPPPPPVRLPLLLLLAGPGAAAPPCLDGGSPCANGGRCTQLPSREAACLPPG
 WVGERCQLEDPCSHGSPCAGRVCQSSVAVGTARFSCRCPGRFRGPDCSLPDPCLSSPCAHGARCSVGPDG
 RFLCSCPPGYQGRSCRSDVDECRVGEPCRHHGTCLNTPGSFRQCPCAGYTGPLCENPAVPCAPSPCRNGG
 TCRQSGDLTYDCACLPGFEGQNCENVVDDCPGHRCLNGGTCTVDGVNTYNCQCPPEWTGQFCTEDVDECQL
 QPNACHNGGTCTFNTLGGHSCVCVNGWTGESCSQNIIDDCATAVCFHGATCHDRVASFYCACPMGKTGLLCH
 LDDACVSNPCHEDAICDTPVNGRAICTCPPGFTGGACDQDVDECSIGANPCEHLGRCVNTQGSFLCQCG
 RGYTGPRCETDVNECLSGPCRQATCLDRIGQFTICIMAGFTGTyceVDIDEQSSPCVNGGVCKDRVNG
 FSCTCPSGFSGSTCQLDVDECASTPCRNGAKCVDQPDGYECRAEGFEGTLCDRNVDSCDPDCHHGRV
 DGIASFSCACAPGYTGTRCESQVDECRSQPCRHHGKCLDLVDKYLCCCPSGTTGVNCEVNIIDDCASNPT
 FGVCRDGINRYDCVCQPGFTGPLCNVEINECASSPCGEGGSCVDGENFRCLCPPGSLPPLCLPPSHPCA
 HEPCHSHGICYDAPGGFRVCPEPWSGPRCSQSLARDACESQPCRAGGTCSSDGMGFHCTCPPGVQGRQCE
 LLSPCTPNPCEHGRCESAPGQLPVCSCPQGWQPRCQDQVDECAGPAPCGPHGICTNLAGFSCTCHGG
 YTGPSCDQDINDCDPNPCLNGGSCQDGVGSFSCSCLPGFAGPRCARDVDECLSNPCGPGTCTDHVASFTC
 TCPPGYGGFHCEQDLPDCSPSSCFNGGTCTVDGVNSFSCLCRPGYTGHAHCQHEADPCLSRPCLHGGVCSAA
 HPGFRCTCLESFTGPQCQTLVDWCSRQPCQNGGRVCQTGAYCLCPPGWSGRLCDIRSLPCREAAAQIGVR
 LEQLCQAGGQCQVDESSHYCVCEPGRGTGSHCEQEVDPCAQPCQHGGRGCRGMYGGYMCECLPGYNGDNCE
 DDVDECASQPCQHGGSIDL VARYL CSCPPGTLGVLCEINEDDCGPGPPLDSGPRCLHNGTCDVLDVGGFR
 CTCPPGYTGLRCEADINECRSGACHAAHTRDCLQDPGGGFRCLCHAGFSGPRCQTVLSPCESQPCQHGQ
 CRPSPGPGGGLTFTCHCAQPFWGPGRCEVARSCRELQCPVGVPCQQTTPRGPRCACPPGLSGPSCRSPFGS
 PPGASNASCAAAPCLHGGSCRPAPLAPFFRCACAQGWTPRCEAPAAAPEVSEEPRCRAACQAKRGDQR
 CDRECNSPGCGWDGGDCSLSVGDPWRQCEALQCWRLFNNRCDPACSSPACLYDNFDCHAGGRERTCNPV
 YEKYCADHFADGRCDQGCNTEECGWDLDCASEVPALLARGVLLVTVLLPPEELLRSSADFLQRLSAILR
 TSLRFRLDAHQAAMVFPYHRPSPGSEPRARRELAPEVIGSVVMLEIDNRLCLQSPENDHCFDAQSAADY
 LGALSAVERLDFPYPLRDVRGELEPEPEPSVPLPLLVAGAVLLLVLVLMVARRKREHSTLWFPEGF
 SLHKDVASGHKGRREPVGQDALGMKNMAKGESLMGEVATDWMDECEPEAKRLKVEEPMGAEAAVDCRQW
 TQHHLVAADIRVAPAMALTPPQGDADADGMDVNVVRGPDGFTPLMLASFCCGGALEPMPTEEDEADTSASI
 ISDLICQGAQLGARTDRTGETALHLAARYARADAAKRLLDAGADTNAQDHSGRTPLHTAVTADAQGVFQI
 LIRNRSTDL DARMADGSTALILAAARLAVEGMVEELIASHADVNAVDELGKSALHWA AVNNVEATLALLK
 NGANKDMQDSKEETPLFLAAREGSYEA AKLLLDFANREITDHLDRLPDVAQERLHQDIVRLLDQPSGP
 RSPPGPHGLPPLLCPGFAFLPGLKAAQSGSKSRPPGKAGLGPQGRGRGKCLTACPGPLADSSVTL 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]