Anti-NOTCH3 (Neurogenic locus notch homolog protein 3) Polyclonal Antibody

Category: Polyclonal Antibody

Catalog #: AB4B117b

Species Reactivity: Human

Immunogen/Specificity:
Polyclonal antibody produced in rabbits immunizing with a synthetic peptide corresponding to near N-terminal residues of human NOTCH3 (Neurogenic locus notch homolog protein 3)

Description: NOTCH3 (Neurogenic locus notch homolog protein 3) functions as a receptor for membrane-bound ligands Jagged1, Jagged2 and Delta1 to regulate cell-fate determination. Upon ligand activation through the released notch intracellular domain (NICD) it forms a transcriptional activator complex with RBP-J kappa and activates genes of the enhancer of split locus. NOTCH3 affects the implementation of differentiation, proliferation and apoptotic programs. NOTCH3 is a heterodimer of a C-terminal fragment N(TM) and a N-terminal fragment N(EC) which are probably linked by disulfide bonds. NOTCH3 interacts with MAML1, MAML2 and MAML3 which act as transcriptional coactivators for NOTCH3. NOTCH3 is ubiquitously expressed in fetal and adult tissues. It is synthesized in the endoplasmic reticulum as an inactive form which is proteolytically cleaved by a furin-like convertase in the trans-Golgi network before it reaches the plasma membrane to yield an active, ligand-accessible form. Cleavage results in a C-terminal fragment N(TM) and a N-terminal fragment N(EC). Following ligand binding, it is cleaved by TNF-alpha converting enzyme (TACE) to yield a membrane-associated intermediate fragment called notch extracellular truncation (NEXT). This fragment is then cleaved by presenilin dependent gamma-secretase to release a notch-derived peptide containing the intracellular domain (NICD) from the membrane. Defects in NOTCH3 are the cause of cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL). CADASIL causes a type of stroke and dementia of which key features include recurrent subcortical ischemic events and vascular dementia. The disorder affects relatively young adults of both sexes.

Storage Buffer:
This antibody is stored in PBS, 0.01% sodium azide and 50% glycerol.

Preparation:
Purified by antigen-specific affinity chromatography.

Applications:
ELISA 1:2,000 to 1:5,000

Reference:
Gray,G.E., et al, Am. J. Pathol. 154 (3), 785-794 (1999)
Wu,L., et al, Mol. Cell. Biol. 22 (21), 7688-7700 (2002)
Dichgans,M., et al, Neurology 52 (7), 1361-1367 (1999)
Grigg,R., et al, Hum. Mutat. 16 (5), 449-450 (2000)
Joutel,A., et al, Neurology 54 (9), 1874-1875 (2000)
Oliveri,R.L., et al, Arch. Neurol. 58 (9), 1418-1422 (2001)

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