

Notch3 Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 90, 270	Source/Isotype: Rabbit	UniProt ID: #Q9UM47	Entrez-Gene Id: 4854
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Notch3 Antibody detects endogenous levels of total Notch3 protein. The antibody recognizes both full-length (FL) Notch3 at 270 kDa and a truncated protein (NTM) containing a short extracellular region, the transmembrane domain and the intracellular region at 90 kDa.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro2311 of human notch3. Antibodies were purified by protein A and peptide affinity chromatography.

Background

Notch proteins (Notch1-4) are a family of transmembrane receptors that play important roles in development and the determination of cell fate (1). Mature Notch receptors are processed and assembled as heterodimeric proteins, with each dimer composed of a large extracellular ligand-binding domain, a single-pass transmembrane domain, and a smaller cytoplasmic subunit (Notch intracellular domain, NICD) (2). Binding of Notch receptors to ligands of the Delta-Serrate-Lag2 (DSL) family triggers heterodimer dissociation, exposing the receptors to proteolytic cleavages; these result in release of the NICD, which translocates to the nucleus and activates transcription of downstream target genes (3,4).

Notch3 is a member of notch family and processed similar to notch1 (5). It is expressed primarily in arterial smooth muscle cells (SMC). Mutations altering the number of cysteine residues in the notch3 extracellular region are associated with cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL), a hereditary angiopathy leading to strokes and dementia in adults (6-8). Recent studies indicates that notch3 is overexpressed in many types of cancers (9-11).

Background References

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4. Rand, M.D. et al. (2000) *Mol Cell Biol* 20, 1825-35.
5. Baron, M. (2003) *Semin Cell Dev Biol* 14, 113-9.
6. Kalimo, H. et al. (2002) *Brain Pathol* 12, 371-84.
7. Karlström, H. et al. (2002) *Proc Natl Acad Sci USA* 99, 17119-24.
8. Monet, M. et al. (2007) *Hum Mol Genet* 16, 982-92.
9. Park, J.T. et al. (2006) *Cancer Res* 66, 6312-8.
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11. Yamaguchi, N. et al. (2008) *Cancer Res* 68, 1881-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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