

#2889 Store at -20°C

Notch3 Antibody



100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

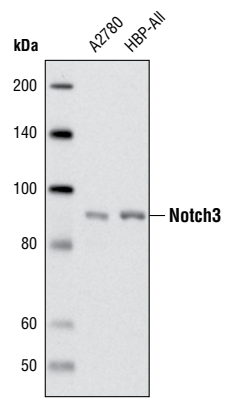
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H	90, 270 kDa	Rabbit**

Background: Notch1 is a transmembrane protein functioning in development and the determination of cell-fate (1). During maturation, the notch molecule is cleaved by a furin-like convertase at its extracellular domain (2). Upon binding to a ligand such as Delta1, or upon extracellular calcium depletion, the carboxy-terminal notch1 fragment is released and further cleaved between Gly1743 and Val1744 (3,4). The resulting activated cytosolic fragment translocates to the nucleus where it activates transcription.

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).

Specificity/Sensitivity: Notch3 Antibody detects endogenous levels of total Notch3 protein. It recognizes the full-length (270 kDa) and the extracellular truncated fragment containing a short extracellular region, the transmembrane domain and the intracellular region (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.



Western blot analysis of extracts from A2780 and HBP-All cells using Notch3 Antibody.

Entrez-Gene ID #4854
Swiss-Prot Acc. #Q9UM47

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Artavanis-Tsakonas, S. et al. (1999) *Science* 284, 770-776.
- (2) Chan, Y.M. and Jan, Y.N. (1998) *Cell* 94, 423-426.
- (3) Schroeter, E.H. et al. (1998) *Nature* 393, 382-386.
- (4) Rand, M.D. et al. (2000) *Mol. Cell. Biol.* 20, 1825-1835.
- (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.
- (10) Gramantieri, L. et al. (2007) *Liver Int* 27, 997-1007.
- (11) Yamaguchi, N. et al. (2008) *Cancer Res* 68, 1881-8.

IMPORTANT: For western blots, incubate membrane with diluted 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 IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.