

Notch 4 (N-17): sc-8643

BACKGROUND

The LIN-12/Notch transmembrane receptors are believed to play a central role in development by regulating cell fate decisions. Four Notch homologs (Notch 1, Notch 2, Notch 3 and Notch 4) have been identified in mammals. The Notch genes are expressed in a variety of embryonic and adult tissues, suggesting that the genes are involved in multiple signaling pathways. Notch proteins have been found to be overexpressed or rearranged in human tumors. Ligands for Notch include Jagged1, Jagged2 and Delta. Jagged1 can activate Notch and prevent myoblast differentiation by inhibiting the expression of muscle regulatory and structural genes. Jagged2 may be involved in tissue development that is dependent upon epithelial-mesenchymal interactions. In addition to its normal expression in the adrenal gland and placenta, Delta expression has also been found in neuroendocrine tumors.

REFERENCES

- Weinmaster, G., et al. 1992. Notch 2: a second mammalian Notch gene. *Development* 116: 931-941.
- Kopan, R., et al. 1993. Mouse notch: expression in hair follicles correlates with cell fate determination. *J. Cell Biol.* 121: 631-641.
- Laborda, J., et al. 1993. *dIk*, a putative mammalian homeotic gene differentially expressed in small cell lung carcinomas and neuroendocrine tumor cell line. *J. Biol. Chem.* 268: 3817-3820.

CHROMOSOMAL LOCATION

Genetic locus: NOTCH4 (human) mapping to 6p21.32.

SOURCE

Notch 4 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Notch 4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8643 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Notch 4 (N-17) is recommended for detection of Notch 4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Notch 4 siRNA (h): sc-40137, Notch 4 shRNA Plasmid (h): sc-40137-SH and Notch 4 shRNA (h) Lentiviral Particles: sc-40137-V.

Molecular Weight (predicted) of Notch 4 isoforms 1/2/3: 210/61/40 kDa.

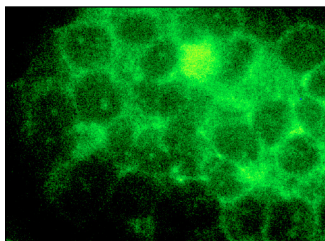
Molecular Weight (observed) of Notch 4: 117-218 kDa.

Positive Controls: JAR cell lysate: sc-2276 or Jurkat whole cell lysate: sc-2204.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Notch 4 (N-17): sc-8643. Immunofluorescence staining of methanol-fixed JAR cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Farnie, G., et al. 2007. Novel cell culture technique for primary ductal carcinoma *in situ*: role of Notch and epidermal growth factor receptor signaling pathways. *J. Natl. Cancer Inst.* 99: 616-627.
- De Falco, M., et al. 2007. Expression and distribution of notch protein members in human placenta throughout pregnancy. *Placenta* 28: 118-126.
- Cobellis, L., et al. 2007. Distribution of Notch protein members in normal and preeclampsia-complicated placentas. *Cell Tissue Res.* 330: 527-534.
- Ustunel, I., et al. 2008. The immunohistochemical localization of Notch receptors and ligands in human articular cartilage, chondroprogenitor culture and ultrastructural characteristics of these progenitor cells. *Acta Histochem.* 110: 397-407.
- Hardy, K.M., et al. 2010. Regulation of the embryonic morphogen Nodal by Notch 4 facilitates manifestation of the aggressive melanoma phenotype. *Cancer Res.* 70: 10340-10350.
- Sahin, Z., et al. 2011. Distribution of Notch family proteins in intrauterine growth restriction and hypertension complicated human term placentas. *Acta Histochem.* 113: 270-276.
- Hunkapiller, N.M., et al. 2011. A role for Notch signaling in trophoblast endovascular invasion and in the pathogenesis of pre-eclampsia. *Development* 138: 2987-2998.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **Notch 4 (A-12): sc-393893** or **Notch 4 (C-3): sc-377399**, our highly recommended monoclonal alternatives to Notch 4 (N-17). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Notch 4 (A-12): sc-393893**.