

## Notch 2 (M-20): sc-7423

### BACKGROUND

The LIN-12/Notch family of transmembrane receptors is believed to play a central role in development by regulating cell fate decisions. To date, four notch homologs have been identified in mammals and have been designated Notch 1, Notch 2, Notch 3 and Notch 4. The notch genes are expressed in a variety of tissues in both the embryonic and adult organism, suggesting that the genes are involved in multiple signaling pathways. The notch proteins have been found to be overexpressed or rearranged in human tumors. Ligands for notch include Jagged1, Jagged2 and Delta. Jagged can activate notch and prevent myoblast differentiation by inhibiting the expression of muscle regulatory and structural genes. Jagged2 is thought to be involved in the development of various tissues whose development is dependent upon epithelial-mesenchymal interactions. Normal Delta expression is restricted to the adrenal gland and placenta. Delta expression has also been found in neuroendocrine tumors such as neuroblastomas and pheochromocytomas.

### 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.

### CHROMOSOMAL LOCATION

Genetic locus: Notch2 (mouse) mapping to 3 F2.2.

### SOURCE

Notch 2 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Notch 2 of mouse 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-7423 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Notch 2 (M-20) is recommended for detection of Notch 2 of mouse and rat 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).

Notch 2 (M-20) is also recommended for detection of Notch 2 in additional species, including equine.

Suitable for use as control antibody for Notch 2 siRNA (m): sc-40136, Notch 2 shRNA Plasmid (m): sc-40136-SH and Notch 2 shRNA (m) Lentiviral Particles: sc-40136-V.

Molecular Weight of Notch 2: 265 kDa.

### SELECT PRODUCT CITATIONS

- Nijjar, S.S., et al. 2002. Altered Notch ligand expression in human liver disease: further evidence for a role of the Notch signaling pathway in hepatic neovascularization and biliary ductular defects. *Am. J. Pathol.* 160: 1695-1703.
- Tsunematsu, R., et al. 2004. Mouse Fbw7/SEL-10/Cdc4 is required for Notch degradation during vascular development. *J. Biol. Chem.* 279: 9417-9423.
- Parr, C., et al. 2004. The possible correlation of Notch receptors, Notch 1 and Notch 2, with clinical outcome and tumour clinicopathological parameters in human breast cancers. *Int. J. Mol. Med.* 14: 779-786.
- Fan, X., et al. 2004. Notch 1 and Notch 2 have opposite effects on embryonal brain tumor growth. *Cancer Res.* 4: 7787-7793.
- Köhler, C., et al. 2004. Expression of Notch 1 and its ligand Jagged1 in rat liver during liver regeneration. *Hepatology* 39: 1056-1065.
- Sahin, Z., et al. 2005. Effect of experimental varicocele on the expressions of Notch 1, 2, and 3 in rat testes: an immunohistochemical study. *Fertil. Steril.* 83: 86-94.
- Monsalve, E., et al. 2006. Notch 1 upregulation and signaling following macrophage activation modulates gene expression patterns known to affect antigen-presenting capacity and cytotoxic activity. *J. Immunol.* 176: 5362-5373.
- Sinha-Hikim, I., et al. 2006. Effects of testosterone supplementation on skeletal muscle fiber hypertrophy and satellite cells in community-dwelling older men. *J. Clin. Endocrinol. Metab.* 91: 3024-3033.
- Urs, S., et al. 2008. Soluble forms of the Notch ligands  $\delta$ 1 and Jagged1 promote *in vivo* tumorigenicity in NIH3T3 fibroblasts with distinct phenotypes. *Am. J. Pathol.* 173: 865-878.
- Orr, B., et al. 2009. A role for notch signaling in stromal survival and differentiation during prostate development. *Endocrinology* 150: 463-472.
- Pérez-Cabezas, B., et al. 2011. Ligation of Notch receptors in human conventional and plasmacytoid dendritic cells differentially regulates cytokine and chemokine secretion and modulates Th cell polarization. *J. Immunol.* 186: 7006-7015.
- Qiao, L., et al. 2012. Notch signaling change in pulmonary vascular remodeling in rats with pulmonary hypertension and its implication for therapeutic intervention. *PLoS ONE* 7: e51514.

### STORAGE

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

### RESEARCH USE

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