SANTA CRUZ BIOTECHNOLOGY, INC.

Notch 1 (G-20): sc-23301

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 Jagged, 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

1. Weinmaster, G., et al. 1992. Notch 2: a second mammalian Notch gene. Development 116: 931-941.
2. Kopan, R., et al. 1993. Mouse Notch: expression in hair follicles correlates with cell fate determination. J. Cell Biol. 121: 631-641.
3. Laborda, J., et al. 1993. dlk, a putative mammalian homeotic gene differentially expressed in small cell lung carcinomas and neuroendocrine tumor cell line. J. Biol. Chem. 268: 3817-3820.
4. Swiatek, P.J., et al. 1994. Notch 1 is essential for postimplantation development in mice. Genes Dev. 8: 707-719.
5. Lindsell, C.E., et al. 1995. Jagged: a mammalian ligand that activates Notch 1. Cell 80: 909-917.
6. Uyttendaele, H., et al. 1996. Notch 4/int-3, a mammary proto-oncogene, is an endothelial cell-specific mammalian Notch gene. Development 122: 2251-2259.

CHROMOSOMAL LOCATION

Genetic locus: NOTCH1 (human) mapping to 9q34.3; Notch1 (mouse) mapping to 2 A3.

SOURCE

Notch 1 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Notch 1 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-23301 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Notch 1 (G-20) is recommended for detection of Notch 1 precursor, mature Notch 1 and Notch 1 NEXT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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); non cross-reactive with Notch 1 NICD (active form).

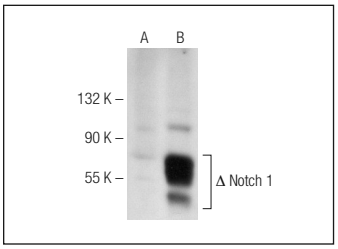
Notch 1 (G-20) is also recommended for detection of Notch 1 precursor, mature Notch 1 and Notch 1 NEXT in additional species, including canine and bovine.

Molecular Weight of full-length Notch 1: 300 kDa.

Molecular Weight of Notch 1 transmembrane fragment: 120 kDa.

Positive Controls: Notch 1 (m): 293T Lysate: sc-110326, FHs 173We cell lysate: sc-2417 or F9 cell lysate: sc-2245.

DATA



Notch 1 (G-20): sc-23301. Western blot analysis of Notch 1 expression in non-transfected: sc-117752 (**A**) and truncated mouse Notch 1 transfected: sc-110326 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, W.H., et al. 2007. Notch inhibits apoptosis by direct interference with XIAP ubiquitination and degradation. EMBO J. 26: 1660-1669.
2. Karlsson, C., et al. 2009. Identification of a stem cell niche in the zone of Ranvier within the knee joint. J. Anat. 215: 355-363.
3. Kyriazis, G.A., et al. 2010. Stress-induced switch in Numb isoforms enhances Notch-dependent expression of subtype-specific transient receptor potential channel. J. Biol. Chem. 285: 6811-6825.

RESEARCH USE

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