SANTA CRUZ BIOTECHNOLOGY, INC.

Notch 3 (M-20): sc-7424

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.

CHROMOSOMAL LOCATION

Genetic locus: NOTCH3 (human) mapping to 19p13.12; Notch3 (mouse) mapping to 17 B1.

SOURCE

Notch 3 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Notch 3 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-7424 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Notch 3 (M-20) is recommended for detection of Notch 3 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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 3 siRNA (h): sc-37135, Notch 3 siRNA (m): sc-37136, Notch 3 shRNA Plasmid (h): sc-37135-SH, Notch 3 shRNA Plasmid (m): sc-37136-SH, Notch 3 shRNA (h) Lentiviral Particles: sc-37135-V and Notch 3 shRNA (m) Lentiviral Particles: sc-37136-V.

Molecular Weight of Notch 3: 280/120 kDa.

Positive Controls: BC_3H1 cell lysate: sc-2299.

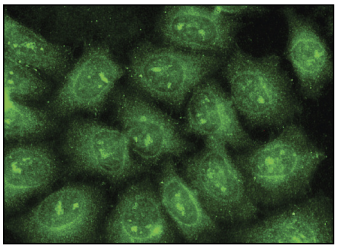
STORAGE

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

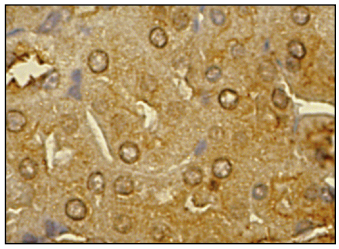
RESEARCH USE

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

DATA



Notch 3 (M-20): sc-7424. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.



Notch 3 (M-20): sc-7424. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney tissue showing membrane and nuclear localization.

SELECT PRODUCT CITATIONS

1. Bellavia, D., et al. 2000. Constitutive activation of NFκB and T cell leukemia/lymphoma in Notch 3 transgenic mice. EMBO J. 19: 3337-3348.
2. Meng, H., et al. 2009. Thrombospondin 2 potentiates notch3/jagged1 signaling. J. Biol. Chem. 284: 7866-7874.
3. Doi, H., et al. 2009. Notch signaling regulates the differentiation of bone marrow-derived cells into smooth muscle-like cells during arterial lesion formation. Biochem. Biophys. Res. Commun. 381: 654-659.
4. 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.
5. Raafat, A., et al. 2011. Expression of Notch receptors, ligands, and target genes during development of the mouse mammary gland. J. Cell. Physiol. 226: 1940-1952.
6. Boulos, N., et al. 2011. Notch3 is essential for regulation of the renal vascular tone. Hypertension 57: 1176-1182.
7. Caolo, V., et al. 2011. Soluble Jagged-1 inhibits neointima formation by attenuating Notch-Herp2 signaling. Arterioscler. Thromb. Vasc. Biol. 31: 1059-1065.
8. 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.
9. Matsumoto, A., et al. 2011. Fbxw7-dependent degradation of Notch is required for control of "stemness" and neuronal-glial differentiation in neural stem cells. J. Biol. Chem. 286: 13754-13764.