SANTA CRUZ BIOTECHNOLOGY, INC.

Notch 4 (C-19): sc-8644

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

Notch 4 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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-8644 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.

RESEARCH USE

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

APPLICATIONS

Notch 4 (C-19) is recommended for detection of Notch 4 of 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).

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.

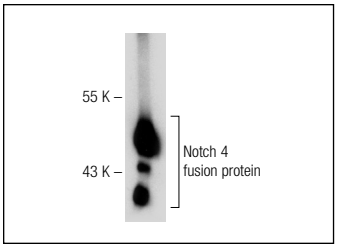
Molecular Weight (observed) of Notch 4: 117-218 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Notch 4 (C-19): sc-8644. Western blot analysis of human recombinant Notch 4 fusion protein.

SELECT PRODUCT CITATIONS

1. Ishii, H., et al. 2001. Expression of notch homologues in the synovium of rheumatoid arthritis and osteoarthritis patients. Rheumatol. Int. 21: 10-14.
2. Ng, W., et al. 2008. Human umbilical cord epithelial cells express Notch 1: implications for its epidermal-like differentiation. J. Dermatol. Sci. 49: 143-152.
3. 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.
4. 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.
5. Kim, M.H., et al. 2013. Colon cancer progression is driven by APEX1-mediated upregulation of Jagged. J. Clin Invest. E-Pulished.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.