

Notch 4 (C-3): sc-377399

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. Notch2: a second mammalian Notch gene. *Development* 116: 931-941.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: Notch4 (mouse) mapping to 17 B1.

SOURCE

Notch 4 (C-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-31 near the N-terminus of Notch 4 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377399 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Notch 4 (C-3) is recommended for detection of Notch 4 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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), 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 4 siRNA (m): sc-40138, Notch 4 shRNA Plasmid (m): sc-40138-SH and Notch 4 shRNA (m) Lentiviral Particles: sc-40138-V.

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

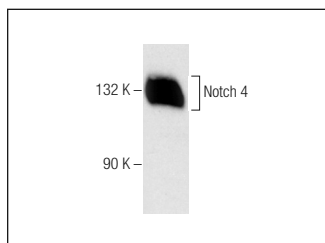
Molecular Weight (observed) of Notch 4: 117-218 kDa.

Positive Controls: mouse kidney extract: sc-2255.

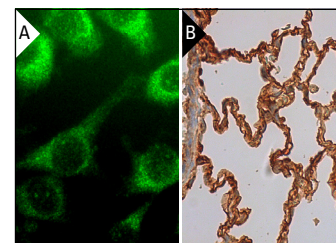
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Notch 4 (C-3): sc-377399. Western blot analysis of Notch 4 expression in mouse kidney tissue extract.



Notch 4 (C-3): sc-377399. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat lung tissue showing membrane and cytoplasmic staining of pneumocytes and macrophages (B).

SELECT PRODUCT CITATIONS

- Karcher, J.R., et al. 2015. Genome-wide epigenetic and proteomic analysis reveals altered Notch signaling in EPC dysfunction. *Physiol. Rep.* 3: e12358.
- Du, Z., et al. 2021. Systematic evaluation for the influences of the SOX17/Notch receptor family members on reversing enzalutamide resistance in castration-resistant prostate cancer cells. *Front. Oncol.* 11: 607291.

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.

PROTOCOLS

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