SANTA CRUZ BIOTECHNOLOGY, INC.

Notch 3 (A-6): sc-515825

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

SOURCE

Notch 3 (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2290-2316 near the C-terminus of Notch 3 of mouse origin.

PRODUCT

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

APPLICATIONS

Notch 3 (A-6) is recommended for detection of Notch 3 of mouse, rat and human 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) 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.

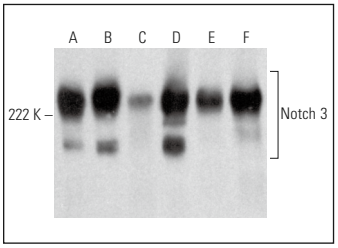
Molecular Weight of Notch 3: 280/120 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, AMJ2-C8 whole cell lysate: sc-364366 or NRK whole cell lysate: sc-364197.

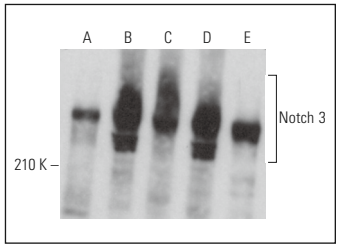
STORAGE

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

DATA



Notch 3 (A-6): sc-515825. Western blot analysis of Notch 3 expression in NIH/3T3 (**A**), AMJ2-C8 (**B**), BC_3H1 (**C**), C2C12 (**D**), NRK (**E**) and RAT2 (**F**) whole cell lysates.



Notch 3 (A-6): sc-515825. Western blot analysis of Notch 3 expression in J774.A1 (**A**), MCF7 (**B**), A-10 (**C**), SJRH30 (**D**) and A-673 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, Y., et al. 2018. Lutein inhibits proliferation, invasion and migration of hypoxic breast cancer cells via downregulation of HES1. Int. J. Oncol. 52: 2119-2129.
2. Pei, L., et al. 2018. KRAB zinc-finger protein 382 regulates epithelial-mesenchymal transition and functions as a tumor suppressor, but is silenced by CpG methylation in gastric cancer. Int. J. Oncol. 53: 961-972.
3. Kim, A.R. and Gu, M.J. 2019. The clinicopathologic significance of Notch 3 expression in prostate cancer. Int. J. Clin. Exp. Pathol. 12: 3535-3541.
4. Landor, S.K.J., et al. 2021. PIM-induced phosphorylation of Notch 3 promotes breast cancer tumorigenicity in a CSL-independent fashion. J. Biol. Chem. 296: 100593.
5. Capodanno, Y., et al. 2021. Cross-talk among MEN1, p53 and Notch regulates the proliferation of pancreatic neuroendocrine tumor cells by modulating INSM1 expression and subcellular localization. Neoplasia 23: 979-992.
6. Liu, W., et al. 2022. Transcriptome sequencing of LMP2A-transfected gastric cancer cells identifies potential biomarkers in EBV-associated gastric cancer. Virus Genes 58: 515-526.
7. Wang, L., et al. 2023. Expressions and prognostic values of Notch3 and DLL4 in human breast cancer. Technol. Cancer Res. Treat. 22: 15330338221118984.

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.