SANTA CRUZ BIOTECHNOLOGY, INC.

cleaved Notch 1 (m1711): sc-23307

BACKGROUND

The transmembrane protein Notch 1 and its ligands Delta 1, Jagged 1 and Jagged 2 play an essential role in developmental cell fate decisions. The Notch receptor is synthesized in the endoplasmic reticulum as a precursor molecule (p300). The Notch 1 precursor is proteolytically cleaved at Alanine 19 by a furin-like convertase in the the *trans*-Golgi network before reaching the plasma membrane to yield an active, ligand-accesible form. The resultant polypeptides associate as an intramolecular heterodimer on the cell surface. Ligand binding of Notch 1 results in cleavage by TNFα converting enzyme (TACE) at Valine 1722 to yield a membrane-associated intermediate fragment called Notch extracellular truncation (NEXT). Subsequent cleavage at Valine 1755 results in the release of the Notch 1 intracellular domain (NICD) from the membrane. NICD translocates to the nucleus, where it functions as a transcriptional activator in concert with cSL family of DNA-binding proteins.

REFERENCES

1. Jarriault, S., et al. 1995. Signalling downstream of activated mammalian Notch. Nature 6547: 355-358.
2. Hayashi, H., et al. 1996. Isolation of a novel chick homolog of Serrate and its co-expression with c-Notch 1 in chick development. Int. J. Dev. Biol. 6: 1089-1096.

CHROMOSOMAL LOCATION

Genetic locus: Notch1 (mouse) mapping to 2 A3.

SOURCE

cleaved Notch 1 (m1711) is a goat polyclonal antibody raised against a short amino acid sequence containing the neoepitope at Val 1711 of Notch 1 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-23307 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

cleaved Notch 1 (m1711) is recommended for detection of Notch 1 NEXT (Notch extracellular truncation) of mouse and rat 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); non cross-reactive with Notch 1 precursor, mature Notch 1 or Notch 1 NICD (active form).

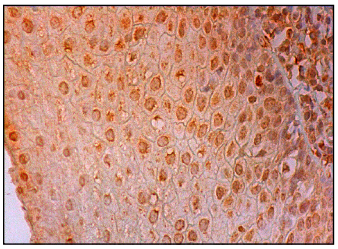
Suitable for use as control antibody for Notch 1 siRNA (m): sc-36096, Notch 1 siRNA (r): sc-270189, Notch 1 shRNA Plasmid (m): sc-36096-SH, Notch 1 shRNA Plasmid (r): sc-270189-SH, Notch 1 shRNA (m) Lentiviral Particles: sc-36096-V and Notch 1 shRNA (r) Lentiviral Particles: sc-270189-V.

Molecular Weight of cleaved Notch 1: 120 kDa.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



cleaved Notch 1 (m1711): sc-23307. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear envelope, nuclear and cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Lee, S.H., et al. 2009. Arachidonic acid potentiates hypoxia-induced VEGF expression in mouse embryonic stem cells: involvement of Notch, Wnt, and HIF-1α. Am. J. Physiol., Cell Physiol. 297: C207-C216.
2. Xu, J., et al. 2010. Hepatitis B virus X protein blunts senescence-like growth arrest of human hepatocellular carcinoma by reducing Notch 1 cleavage. Hepatology 52: 142-154.
3. Tanveer, R., et al. 2012. The endocannabinoid, anandamide, augments Notch-1 signaling in cultured cortical neurons exposed to amyloid-β and in the cortex of aged rats. J. Biol. Chem. 287: 34709-34721.
4. Gopisetty, A., et al. 2013. OX40L/Jagged1 cosignaling by GM-CSF-induced bone marrow-derived dendritic cells is required for the expansion of functional regulatory T cells. J. Immunol. 190: 5516-5525.

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 or our catalog for detailed protocols and support products.