SANTA CRUZ BIOTECHNOLOGY, INC.

Deltex-2 (H-16): sc-101938

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Deltex family of proteins (Deltex-1, 2, 3, and 4) are mammalian homologs of *Drosophila* Deltex. This family contains 2 WWE domains and a C-terminal RING finger domain, which are regions that are frequently found in E3 ubiquitin ligases. Deltex-2, also known as hDTX2 or RING finger protein 58, is a 622 amino acid protein that plays a regulatory role in the Notch signaling pathway. Like Deltex-1, Deltex-2 interacts with an intracellular domain of Notch. Localized to the cytoplasm with partial localization to the nucleus, Deltex-2 has been shown to function as a ubiquitin ligase protein *in vitro*, possibly explaining the mechanism by which it positively and negatively regulates Notch. Deltex-2 is highly expressed in thymus and pancreas where it exists as either a homomultimer or a heteromultimer with other Deltex family members. Two isoforms of Deltex-2 are expressed due to alternative splicing events.

REFERENCES

1. Cornell, M., Evans, D.A., Mann, R., Fostier, M., Flasza, M., Monthatong, M., Artavanis-Tsakonas, S. and Baron, M. 1999. The *Drosophila melanogaster* Suppressor of Deltex gene, a regulator of the Notch receptor signaling pathway, is an E3 class ubiquitin ligase. Genetics 152: 567-576.
2. Kishi, N., Tang, Z., Maeda, Y., Hirai, A., Mo, R., Ito, M., Suzuki, S., Nakao, K., Kinoshita, T., Kadesch, T., Hui, C., Artavanis-Tsakonas, S., Okano, H. and Matsuno, K. 2001. Murine homologs of Deltex define a novel gene family involved in vertebrate Notch signaling and neurogenesis. Int. J. Dev. Neurosci. 19: 21-35.
3. Yamamoto, N., Yamamoto, S., Inagaki, F., Kawaichi, M., Fukamizu, A., Kishi, N., Matsuno, K., Nakamura, K., Weinmaster, G., Okano, H. and Nakafuku, M. 2001. Role of Deltex-1 as a transcriptional regulator downstream of the Notch receptor. J. Biol. Chem. 276: 45031-45040.
4. Endo, Y., Osumi, N. and Wakamatsu, Y. 2003. Deltex/Dtx mediates Notch signaling in regulation of BMP4 expression in cranial neural crest formation during avian development. Dev. Growth Differ. 45: 241-248.
5. Takeyama, K., Aguiar, R.C., Gu, L., He, C., Freeman, G.J., Kutok, J.L., Aster, J.C. and Shipp, M.A. 2003. The BAL-binding protein BBAP and related Deltex family members exhibit ubiquitin-protein isopeptide ligase activity. J. Biol. Chem. 278: 21930-21937.
6. Liu, W.H. and Lai, M.Z. 2005. Deltex regulates T cell activation by targeted degradation of active MEKK1. Mol. Cell. Biol. 25: 1367-1378.
7. Yi, Z., Yi, T. and Wu, Z. 2006. cDNA cloning, characterization and expression analysis of DTX2, a human WWE and RING-finger gene, in human embryos. DNA Seq. 17: 175-180.
8. Lehar, S.M. and Bevan, M.J. 2006. T cells develop normally in the absence of both Deltex-1 and Deltex-2. Mol. Cell. Biol. 26: 7358-7371.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: DTX2 (human) mapping to 7q11.23.

SOURCE

Deltex-2 (H-16) is a purified rabbit polyclonal antibody raised against Deltex-2 of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

Deltex-2 (H-16) is recommended for detection of Deltex-2 of human, dog and zebrafish 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Deltex-2 siRNA (h): sc-89823, Deltex-2 shRNA Plasmid (h): sc-89823-SH and Deltex-2 shRNA (h) Lentiviral Particles: sc-89823-V.

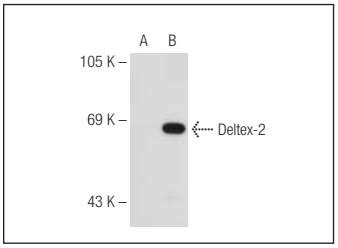
Molecular Weight of Deltex-2: 67 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or Deltex-2 (h3): 293 Lysate: sc-176430.

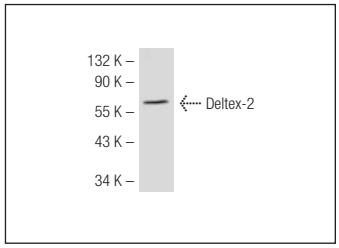
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



Deltex-2 (H-16): sc-101938. Western blot analysis of Deltex-2 expression in non-transfected: sc-110760 (**A**) and human Deltex-2 transfected: sc-176430 (**B**) 293 whole cell lysates.



Deltex-2 (H-16): sc-101938. Western blot analysis of Deltex-2 expression in Hep G2 whole cell lysate

RESEARCH USE

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