SANTA CRUZ BIOTECHNOLOGY, INC.

Delta (E-5): sc-377447

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. Notch proteins have been found to be overexpressed or rearranged in human tumors. Ligands for Notch include Jagged, Jagged-2 and Delta. While blocking the differentiation of progenitor cells into the B cell lineage, Delta promotes the emergence of a population of cells with T cell/NK-cell characteristics. Delta is a membrane protein expressed in heart, pancreas, brain and muscle during gastrulation and early organogenesis, and in adult heart and lung.

REFERENCES

1. Simpson, P. 1994. The Notch receptors. Austin, Texas: R.G. Landes Company.
2. Bettenhausen, B., et al. 1995. Transient and restricted expression during mouse embryogenesis of Dll1, a murine gene closely related to *Drosophila* Delta. Development 121: 2407-2418.
3. Girard, L., et al. 1996. Frequent provirus insertional mutagenesis of Notch 1 in thymomas of MMTVD/Myc transgenic mice suggests a collaboration of c-Myc and Notch 1 for oncogenesis. Genes Dev. 10: 1930-1944.
4. Jaleco, A.C., et al. 2001. Differential effects of Notch ligands Delta-1 and Jagged-1 in human lymphoid differentiation. J. Exp. Med. 7: 991-1002.
5. LaVoie, M.J., et al. 2003. The Notch ligands, Jagged and Delta, are sequentially processed by α-secretase and presenilin/γ-secretase and release signaling fragments. J. Biol. Chem. 278: 34427-34437.
6. Ahimou, F., et al. 2004. The adhesion force of Notch with Delta and the rate of Notch signaling. J. Cell Biol. 167: 1217-1229.
7. Morgan, S.C., et al. 2004. Microglia release activators of neuronal proliferation mediated by activation of mitogen-activated protein kinase, phosphatidylinositol-3-kinase/Akt and Delta-Notch signalling cascades. J. Neurochem. 90: 89-101.

CHROMOSOMAL LOCATION

Genetic locus: DLL1 (human) mapping to 6q27; Dll1 (mouse) mapping to 17 A2.

SOURCE

Delta (E-5) is a mouse monoclonal antibody raised against amino acids 459-723 of Delta of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

Delta (E-5) is recommended for detection of Delta 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 Delta siRNA (h): sc-37200, Delta siRNA (m): sc-37201, Delta shRNA Plasmid (h): sc-37200-SH, Delta shRNA Plasmid (m): sc-37201-SH, Delta shRNA (h) Lentiviral Particles: sc-37200-V and Delta shRNA (m) Lentiviral Particles: sc-37201-V.

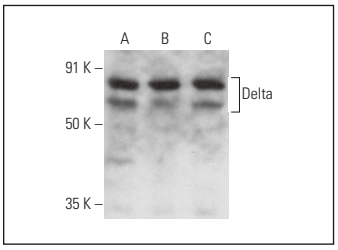
Molecular Weight of Delta: 75 kDa.

Positive Controls: Delta (h): 293T Lysate: sc-171132, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

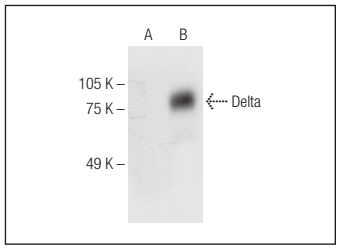
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Delta (E-5): sc-377447. Western blot analysis of Delta expression in HeLa (**A**), Hep G2 (**B**) and AMJ2-C8 (**C**) whole cell lysates.



Delta (E-5): sc-377447. Western blot analysis of Delta expression in non-transfected: sc-117752 (**A**) and human Delta transfected: sc-171132 (**B**) 293T whole cell lysates.

PROTOCOLS

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