SANTA CRUZ BIOTECHNOLOGY, INC.

Delta-4 (m): 293T Lysate: sc-126721

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 Jagged1, Jagged2 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. The protein is a membrane protein expressed in heart, pancreas, brain and muscle during gastrulation and early organogenesis, and in adult heart and lung. Delta-4 is a membrane protein that activates Notch 1 and Notch 4. It is expressed in a wide range of adult and fetal tissues, especially in vascular endothelium.

REFERENCES

1. Karanu, F.N., Murdoch, B., Miyabayashi, T., Ohno, M., Koremoto, M., Gallacher, L., Wu, D., Itoh, A., Sakano, S. and Bhatia, M. 2001. Human homologues of Delta-1 and Delta-4 function as mitogenic regulators of primitive human hematopoietic cells. Blood 97: 1960-1967.
2. Yoneya, T., Tahara, T., Nagao, K., Yamada, Y., Yamamoto, T., Osawa, M., Miyatani, S. and Nishikawa, M. 2001. Molecular cloning of Delta-4, a new mouse and human Notch ligand. J. Biochem. 129: 27-34.
3. Taylor, K.L., Henderson, A.M. and Hughes, C.C. 2002. Notch activation during endothelial cell network formation *in vitro* targets the basic HLH transcription factor HESR-1 and downregulates VEGFR-2/KDR expression. Microvasc. Res. 64: 372-383.
4. Nijjar, S.S., Wallace, L., Crosby, H.A., Hubscher, S.G. and Strain, A.J. 2002. Altered Notch ligand expression in human liver disease: further evidence for a role of the Notch signaling pathway in hepatic neovascularization and biliary ductular defects. Am. J. Pathol. 160: 1695-1703.
5. Nakatsu, M.N., Sainson, R.C., Aoto, J.N., Taylor, K.L., Aitkenhead, M., Pérez-del-Pulgar, S., Carpenter, P.M. and Hughes, C.C. 2003. Angiogenic sprouting and capillary lumen formation modeled by human umbilical vein endothelial cells (HUVEC) in Fibrin gels: the role of fibroblasts and Angiopoietin-1. Microvasc. Res. 66: 102-112.
6. Tohda, S., Murata-Ohsawa, M., Sakano, S. and Nara, N. 2003. Notch ligands, Delta-1 and Delta-4 suppress the self-renewal capacity and long-term growth of two myeloblastic leukemia cell lines. Int. J. Oncol. 22: 1073-1079.
7. Lauret, E., Catelain, C., Titeux, M., Poirault, S., Dando, J.S., Dorsch, M., Villeval, J.L., Groseil, A., Vainchenker, W., Sainteny, F., Bennaceur-Griscelli, A. 2004. Membrane-bound Delta-4 notch ligand reduces the proliferative activity of primitive human hematopoietic $CD34^{+}$ $CD38^{low}$ cells while maintaining their LTC-IC potential. Leukemia 18: 788-797.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Dll4 (mouse) mapping to 2 E5.

PRODUCT

Delta-4 (m): 293T Lysate represents a lysate of mouse Delta-4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Delta-4 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Delta-4 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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