



leupaxin (h2): 293T Lysate: sc-170443

BACKGROUND

Leupaxin, also designated LDPL or LPXN, is a 386 amino acid cytoplasmic protein and member of the paxillin family. Leupaxin is highly expressed in lymphoid tissues such as spleen, lymph node, thymus and appendix, with low expression in bone marrow and fetal liver. Consisting of four leucine-rich LD-motifs at the N-terminus and four LIM domains at the C-terminus, leupaxin associates with a member of the focal adhesion kinase family, PYK2, in lymphoid cells. The leupaxin and PYK2 complex is involved in cell type-specific signaling in which it regulates signaling at sites of adhesion. Leupaxin is a substrate for tyrosine kinase in lymphoid cells and is suggested to participate in and be regulated by tyrosine kinase activity. Leupaxin may be a potential progression marker for a subset of prostate cancer and may act as a novel coactivator of the androgen receptor.

REFERENCES

1. Lipsky, B.P., Beals, C.R. and Staunton, D.E. 1998. Leupaxin is a novel LIM domain protein that forms a complex with PYK2. *J. Biol. Chem.* 273: 11709-11713.
2. Gupta, A., Lee, B.S., Khadeer, M.A., Tang, Z., Chellaiah, M., Abu-Amer, Y., Goldknopf, J. and Hruska, K.A. 2003. Leupaxin is a critical adaptor protein in the adhesion zone of the osteoclast. *J. Bone Miner. Res.* 18: 669-685.
3. Watanabe, N., Amano, N., Ishizuka, H. and Mashima, K. 2005. Leupaxin binds to PEST domain tyrosine phosphatase PEP. *Mol. Cell. Biochem.* 269: 13-17.
4. Chew, V. and Lam, K.P. 2007. Leupaxin negatively regulates B cell receptor signaling. *J. Biol. Chem.* 282: 27181-27191.
5. Sundberg-Smith, L.J., DiMichele, L.A., Sayers, R.L., Mack, C.P. and Taylor, J.M. 2008. The LIM protein leupaxin is enriched in smooth muscle and functions as an serum response factor cofactor to induce smooth muscle cell gene transcription. *Circ. Res.* 102: 1502-1511.
6. Kaufuss, S., Grzmil, M., Hemmerlein, B., Thelen, P., Schweyer, S., Neesen, J., Bubendorf, L., Glass, A.G., Jarry, H., Auber, B. and Burfeind, P. 2008. Leupaxin, a novel coactivator of the androgen receptor, is expressed in prostate cancer and plays a role in adhesion and invasion of prostate carcinoma cells. *Mol. Endocrinol.* 22: 1606-1621.
7. Kaufuss, S., von Hardenberg, S., Schweyer, S., Herr, A.M., Laccone, F., Wolf, S. and Burfeind, P. 2009. Leupaxin acts as a mediator in prostate carcinoma progression through deregulation of p120catenin expression. *Oncogene* 28: 3971-3982.
8. Tanaka, T., Moriwaki, K., Murata, S. and Miyasaka, M. 2010. LIM domain-containing adaptor, leupaxin, localizes in focal adhesion and suppresses the integrin-induced tyrosine phosphorylation of paxillin. *Cancer Sci.* 101: 363-368.
9. Chen, P.W. and Kroog, G.S. 2010. Leupaxin is similar to paxillin in focal adhesion targeting and tyrosine phosphorylation but has distinct roles in cell adhesion and spreading. *Cell Adh. Migr.* 4: 527-540.

CHROMOSOMAL LOCATION

Genetic locus: LPXN (human) mapping to 11q12.1.

PRODUCT

leupaxin (h2): 293T Lysate represents a lysate of human leupaxin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

leupaxin (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive leupaxin 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.

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.

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.