

cytohesin-1 (m): 293T Lysate: sc-125210

BACKGROUND

Cytohesin-1 is an ARF guanine nucleotide exchange factor (GEF). Cytohesin-1 contains a phospholipid-binding C-terminal pleckstrin homology (PH) domain, a central Sec7 domain and an N-terminal coiled-coil region. The PH domain binds to phosphatidylinositol 3,4,5-triphosphate (PtdIns-3,4,5-P₃), a phosphatidylinositol 3-kinase (PI-3-kinase) metabolite. The Sec7 domain is responsible for GDP/GTP exchange activity and brefeldin A inhibition. Cytohesin-1 catalyzes *in vitro* nucleotide exchange on ARF1 and ARF3, but it has no effect on ARF6. Additionally, cytohesin-1 is a regulatory factor for the α L β 2 Integrin in lymphocytes. Through interaction with integrins, cytohesin-1 may participate in inside-out cell signaling.

REFERENCES

1. Liu, L. and Pohajdak, B. 1992. Cloning and sequencing of a human cDNA from cytolytic NK/T cells with homology to yeast Sec7. *Biochim. Biophys. Acta* 1132: 75-78.
2. Kolanus, W., Nagel, W., Schiller, B., Zeitmann, L., Godar, S., Stockinger, H. and Seed, B. 1996. α L β 2 Integrin/LFA-1 binding to ICAM-1 induced by cytohesin-1, a cytoplasmic regulatory molecule. *Cell* 86: 233-242.
3. Meacci, E., Tsai, S.C., Adamik, R., Moss, J. and Vaughan, M. 1997. Cytohesin-1, a cytosolic guanine nucleotide-exchange protein for ADP-ribosylation factor. *Proc. Natl. Acad. Sci. USA* 94: 1745-1748.
4. Klarlund, J.K., Guilherme, A., Holik, J.J., Virbasius, J.V., Chawla, A. and Czech, M.P. 1997. Signaling by phosphoinositide-3,4,5-trisphosphate through proteins containing pleckstrin and Sec7 homology domains. *Science* 275: 1927-1930.
5. Sata, M., Donaldson, J.G., Moss, J. and Vaughan, M. 1998. Brefeldin A inhibited guanine nucleotide-exchange activity of Sec7 domain from yeast Sec7 with yeast and mammalian ADP ribosylation factors. *Proc. Natl. Acad. Sci. USA* 95: 4204-4208.
6. Franco, M., Boretto, J., Robineau, S., Monier, S., Goud, B., Chardin, P. and Chavrier, P. 1998. ARNO3, a Sec7-domain guanine nucleotide exchange factor for ADP ribosylation factor 1, is involved in the control of Golgi structure and function. *Proc. Natl. Acad. Sci. USA* 95: 9926-9931.

CHROMOSOMAL LOCATION

Genetic locus: Pscd1 (mouse) mapping to 11 E2.

PRODUCT

cytohesin-1 (m): 293T Lysate represents a lysate of mouse cytohesin-1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

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.

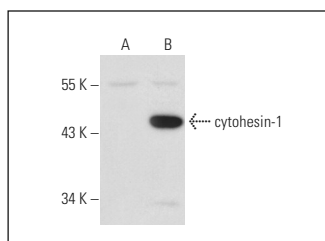
APPLICATIONS

cytohesin-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive cytohesin-1 antibodies. Recommended use: 10-20 μ l per lane.

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

cytohesin-1 (CYT1-82): sc-59491 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse cytohesin-1 expression in cytohesin-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



cytohesin-1 (CYT1-82): sc-59491. Western blot analysis of cytohesin-1 expression in non-transfected: sc-117752 (A) and mouse cytohesin-1 transfected: sc-125210 (B) 293T whole cell lysates.

PROTOCOLS

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