SANTA CRUZ BIOTECHNOLOGY, INC.

cytohesin-1 (N-19): sc-9733

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 αLβ2 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., et al. 1996. αLβ2 integrin/LFA-1 binding to ICAM-1 induced by cytohesin-1, a cytoplasmic regulatory molecule. Cell 86: 233-242.
3. Meacci, E., et al. 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., et al. 1997. Signaling by phosphoinositide-3,4,5-trisphosphate through proteins containing pleckstrin and Sec7 homology domains. Science 275: 1927-1930.
5. Sata, M., et al. 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., et al. 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: CYTH1 (human) mapping to 17q25.3; Cyth1 (mouse) mapping to 11 E2.

SOURCE

cytohesin-1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of cytohesin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9733 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

cytohesin-1 (N-19) is recommended for detection of cytohestin-1 (also designated Sec7 B2-1) of mouse, rat and human 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)], 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).

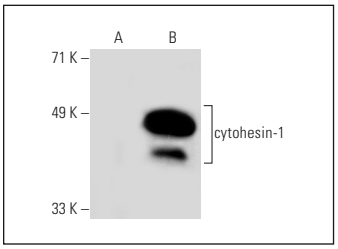
cytohesin-1 (N-19) is also recommended for detection of cytohestin-1 (also designated Sec7 B2-1) in additional species, including porcine.

Suitable for use as control antibody for cytohesin-1 siRNA (h): sc-40470, cytohesin-1 siRNA (m): sc-40471, cytohesin-1 shRNA Plasmid (h): sc-40470-SH, cytohesin-1 shRNA Plasmid (m): sc-40471-SH, cytohesin-1 shRNA (h) Lentiviral Particles: sc-40470-V and cytohesin-1 shRNA (m) Lentiviral Particles: sc-40471-V.

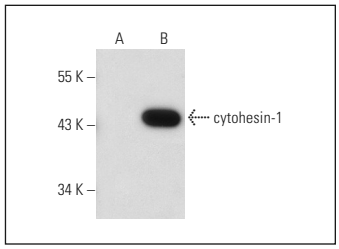
Molecular Weight of cytohesin-1: 50 kDa.

Positive Controls: cytohesin-1 (m): 293T Lysate: sc-125210, cytohesin-1 (h): 293T Lysate: sc-116153 or Jurkat whole cell lysate: sc-2204.

DATA



cytohesin-1 (N-19): sc-9733. Western blot analysis of cytohesin-1 expression in non-transfected: sc-117752 (**A**) and human cytohesin-1 transfected: sc-116153 (**B**) 293T whole cell lysates.



cytohesin-1 (N-19): sc-9733. 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.

RESEARCH USE

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

PROTOCOLS

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