

cytohesin-1/2 (C-20): sc-9729

BACKGROUND

Cytohesin-1 and cytohesin-2, also known as ARNO (ARF nucleotide-binding-site opener), are ARF-1 guanine nucleotide exchange factors (GEFs). ARF (ADP Ribosylation factor) proteins, a group within the RAS superfamily, are GTP-binding proteins central to the process of vesicle budding. Cytohesin-1 and cytohesin-2 both contain an N-terminal coiled-coil domain, a Sec 7 domain responsible for GDP/GTP exchange activity, and a C-terminal pleckstrin homology (PH) domain. GEF activity of cytohesin-2 is enhanced by binding of the PH domain to phosphatidylinositol 4,5-bisphosphate which recruits cytohesin-2 to membranes. Cytohesin-1 catalyzes *in vitro* nucleotide exchange on ARF1 and ARF3, but it has no effect on ARF6. Cytohesin-2 is localized to the plasma membrane in mammalian cells and *in vitro* cytohesin-2 stimulates nucleotide exchange on ARF1 and ARF6.

REFERENCES

- 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.
- Kolanus, W., et al. 1996. α L2 Integrin/LFA-1 binding to ICAM-1 induced by cytohesin-1, a cytoplasmic regulatory molecule. *Cell* 86: 233-242.
- 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.
- Paris, S., et al. 1997. Role of protein-phospholipid interactions in the activation of ARF1 by the guanine nucleotide exchange factor ARNO. *J. Biol. Chem.* 272: 22221-22226.
- 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.
- Frank, S., et al. 1998. ARNO is a guanine nucleotide exchange factor for ADP-ribosylation factor 6. *J. Biol. Chem.* 273: 23-27.

CHROMOSOMAL LOCATION

Genetic locus: CYTH1 (human) mapping to 17q25.3, CYTH2 (human) mapping to 19q13.33; Cyth1 (mouse) mapping to 11 E2, Cyth2 (mouse) mapping to 7 B4.

SOURCE

cytohesin-1/2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of cytohesin-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9729 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

cytohesin-1/2 (C-20) is recommended for detection of cytohesin-1 and cytohesin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-1/2 (C-20) is also recommended for detection of cytohesin-1 and cytohesin-2 in additional species, including equine, canine, bovine and porcine.

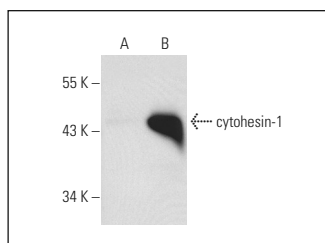
Molecular Weight of cytohesin-1/2: 50 kDa.

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

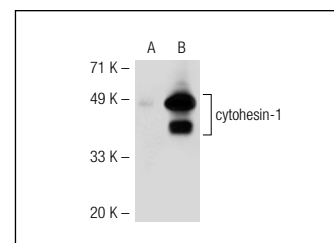
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



cytohesin-1/2 (C-20): sc-9729. 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.



cytohesin-1/2 (C-20): sc-9729. 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.

STORAGE

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


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Try **cytohesin-1/2 (D-11): sc-166542** or **cytohesin-2 (H-7): sc-374640**, our highly recommended monoclonal alternatives to cytohesin-1/2 (C-20).