

# cytohesin-2 (H-7): sc-374640

## BACKGROUND

Cytohesin-2, also known as ARNO (ARF nucleotide-binding-site opener), is an ARF-1 guanine nucleotide exchange factor (GEF). ARF (ADP ribosylation factor) proteins, a group within the RAS superfamily, are GTP-binding proteins central to the process of vesicle budding. Cytohesin-2 contains an N-terminal coiled-coil domain, a Sec 7 domain responsible for GDP/GTP exchange activity, and a C-terminal pleckstrin homology (PH) domain responsible for binding to PIP2. 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-2 is localized to the plasma membrane in mammalian cells and *in vitro* cytohesin-2 stimulates nucleotide exchange on ARF1 and ARF6.

## CHROMOSOMAL LOCATION

Genetic locus: CYTH2 (human) mapping to 19q13.33; Cyth2 (mouse) mapping to 7 B4.

## SOURCE

cytohesin-2 (H-7) is a mouse monoclonal antibody raised against amino acids 31-67 mapping near the N-terminus of cytohesin-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cytohesin-2 (H-7) is available conjugated to agarose (sc-374640 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374640 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374640 PE), fluorescein (sc-374640 FITC), Alexa Fluor® 488 (sc-374640 AF488), Alexa Fluor® 546 (sc-374640 AF546), Alexa Fluor® 594 (sc-374640 AF594) or Alexa Fluor® 647 (sc-374640 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374640 AF680) or Alexa Fluor® 790 (sc-374640 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

cytohesin-2 (H-7) is recommended for detection of cytohesin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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-2 (H-7) is also recommended for detection of cytohesin-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for cytohesin-2 siRNA (h): sc-40468, cytohesin-2 siRNA (m): sc-40469, cytohesin-2 shRNA Plasmid (h): sc-40468-SH, cytohesin-2 shRNA Plasmid (m): sc-40469-SH, cytohesin-2 shRNA (h) Lentiviral Particles: sc-40468-V and cytohesin-2 shRNA (m) Lentiviral Particles: sc-40469-V.

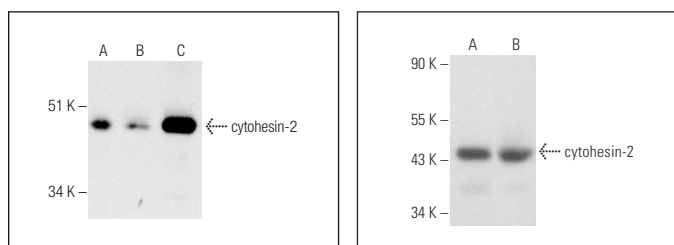
Molecular Weight of cytohesin-2: 47 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, mouse brain extract: sc-2253 or PC-12 cell lysate: sc-2250.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



cytohesin-2 (H-7): sc-374640. Western blot analysis of cytohesin-2 expression in Caco-2 (A) and Daoy (B) whole cell lysates and mouse brain tissue extract (C).

cytohesin-2 (H-7): sc-374640. Western blot analysis of cytohesin-2 expression in PC-12 (A) and NIH/3T3 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Guo, F. and Yan, C.Y. 2015. Effect of SecinH3 on lung injury induced by sepsis of rats. *Asian Pac. J. Trop. Med.* 8: 1049-1054.
- Chakraborti, S., et al. 2017. Role of ADP ribosylation factor6- Cytohesin1- PhospholipaseD signaling axis in U46619 induced activation of NADPH oxidase in pulmonary artery smooth muscle cell membrane. *Arch. Biochem. Biophys.* 633: 1-14.
- Clancy, J.W., et al. 2019. An ARF6-exportin-5 axis delivers pre-miRNA cargo to tumour microvesicles. *Nat. Cell Biol.* 21: 856-866.
- Wang, Y., et al. 2022. Cytohesin-2/ARNO: a novel bridge between cell migration and immunoregulation in synovial fibroblasts. *Front. Immunol.* 12: 809896.
- Zhai, Y., et al. 2022. ARNO is recruited by the neuronal adaptor FE65 to potentiate ARF6-mediated neurite outgrowth. *Open Biol.* 12: 220071.
- Serwe, G., et al. 2023. CNK2 promotes cancer cell motility by mediating ARF6 activation downstream of AXL signalling. *Nat. Commun.* 14: 3560.

## STORAGE

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

## RESEARCH USE

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

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