

caveolin-1 (N-20): sc-894

BACKGROUND

Caveolae (also known as plasmalemmal vesicles) are 50-100 nM flask-shaped membranes that represent a subcompartment of the plasma membrane. On the basis of morphological studies, caveolae have been implicated to function in the transcytosis of various macromolecules (including LDL) across capillary endothelial cells, uptake of small molecules via potocytosis and the compartmentalization of certain signaling molecules including G protein-coupled receptors. Three proteins, caveolin-1, caveolin-2 and caveolin-3, have been identified as principal components of caveolae. Two forms of caveolin-1, designated α and β , share a distinct but overlapping cellular distribution and differ by an amino terminal 31 amino acid sequence which is absent from the β isoform. Caveolin-1 shares 31% identity with caveolin-2 and 65% identity with caveolin-3 at the amino acid level. Functionally, the three proteins differ in their interactions with heterotrimeric G protein isoforms.

CHROMOSOMAL LOCATION

Genetic locus: CAV1 (human) mapping to 7q31.1; Cav1 (mouse) mapping to 6 A2.

SOURCE

caveolin-1 (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of caveolin-1 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-894 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-894 AC, 500 μ g/0.25 ml agarose in 1 ml.

Available as HRP conjugate for Western blotting, sc-894 HRP, 200 μ g/1 ml.

Available as fluorescein (sc-894 FITC) or rhodamine (sc-894 TRITC) conjugates for immunofluorescence, 200 μ g/1 ml.

APPLICATIONS

caveolin-1 (N-20) is recommended for detection of alpha-caveolin-1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

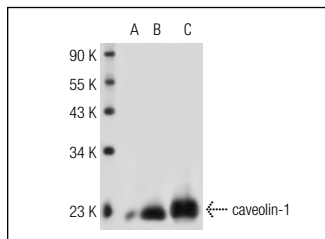
Suitable for use as control antibody for caveolin-1 siRNA (h): sc-29241, caveolin-1 siRNA (m): sc-29942, caveolin-1 shRNA Plasmid (h): sc-29241-SH, caveolin-1 shRNA Plasmid (m): sc-29942-SH, caveolin-1 shRNA (h) Lentiviral Particles: sc-29241-V and caveolin-1 shRNA (m) Lentiviral Particles: sc-29942-V.

Positive Controls: caveolin-1 (h): 293 Lysate: sc-111219, A-431 whole cell lysate: sc-2201 or NIH/3T3 whole cell lysate: sc-2210.

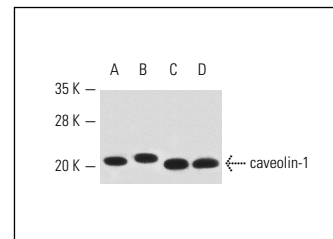
STORAGE

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

DATA



caveolin-1 (N-20): sc-894. Western blot analysis of caveolin-1 expression in non-transfected 293: sc-110760 (A), human caveolin-1 transfected 293: sc-111219 (B) and NIH/3T3 (C) whole cell lysates.



caveolin-1 (N-20): sc-894. Western blot analysis of caveolin-1 p22 expression in A-431 (A), NIH/3T3 (B), MDA-MB-231 (C) and SK-LMS-1 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

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- Harris, J., et al. 2002. Expression of caveolin by bovine lymphocytes and antigen-presenting cells. *Immunology* 105: 190-195.
- Shah, M., et al. 2005. Monocrotaline pyrrole-induced endothelial cell megalocytosis involves a Golgi blockade mechanism. *Am. J. Physiol. Cell Physiol.* 288: C850-C862.
- Hnasko, R., et al. 2005. Developmental regulation of PV-1 in rat lung: association with the nuclear envelope and limited colocalization with Cav-1. *Am. J. Physiol.* 288: 275-284.
- Salatino, M., et al. 2006. Progesterin-induced caveolin-1 expression mediates breast cancer cell proliferation. *Oncogene* 25: 7723-7739.
- Hassan, G., et al. 2006. Trypanosoma cruzi infection induces proliferation of vascular smooth muscle cells. *Infect. Immun.* 74: 152-159.
- Siddiqui, S.S., et al. 2007. p38 MAPK activation coupled to endocytosis is a determinant of endothelial monolayer integrity. *Am. J. Physiol. Lung Cell Mol. Physiol.* 292: L114-L124.
- Graupera, M., et al. 2008. Angiogenesis selectively requires the p110 α isoform of PI3K to control endothelial cell migration. *Nature* 453: 662-666.
- Shoeb, M., et al. 2010. Progesterone-induced reorganization of NOX-2 components in membrane rafts is critical for sperm functioning in *Capra hircus*. *Andrologia* 42: 356-365.
- Palozza, P., et al. 2011. Lycopene regulation of cholesterol synthesis and efflux in human macrophages. *J. Nutr. Biochem.* 22: 971-978.

RESEARCH USE

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