SANTA CRUZ BIOTECHNOLOGY, INC.

SPARC (H-90): sc-25574

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SPARC (for secreted protein acidic and rich in cysteine) is a phosphorylated, acidic, glycine-rich glycoprotein that is secreted by endothelial cells and is present in large amounts in the parietal endoderm of mouse embryos and in human placenta. It is identical to osteonectin, a protein important to bone calcification that is highly conserved between species. SPARC, which can be selectively expressed by the endothelium in response to certain types of injury, induces rounding in adherent endothelial cells *in vitro*. It regulates endothelial barrier function through F-actin-dependent changes in cell shape, coincident with the appearance of intercellular gaps, which provide a paracellular pathway for extravasation of macromolecules.

CHROMOSOMAL LOCATION

Genetic locus: SPARC (human) mapping to 5q33.1; Sparc (mouse) mapping to 11 B1.3.

SOURCE

SPARC (H-90) is a rabbit polyclonal antibody raised against amino acids 1-90 of SPARC 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.

SPARC (H-90) is available conjugated to agarose (sc-25574 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

APPLICATIONS

SPARC (H-90) is recommended for detection of SPARC 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), 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).

SPARC (H-90) is also recommended for detection of SPARC in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SPARC siRNA (h): sc-37166, SPARC siRNA (m): sc-41034, SPARC shRNA Plasmid (h): sc-37166-SH, SPARC shRNA Plasmid (m): sc-41034-SH, SPARC shRNA (h) Lentiviral Particles: sc-37166-V and SPARC shRNA (m) Lentiviral Particles: sc-41034-V.

Molecular Weight of SPARC: 43 kDa.

Positive Controls: SPARC (h): 293T Lysate: sc-111589, A-375 cell lysate: sc-3811 or U-2 OS cell lysate: sc-2295.

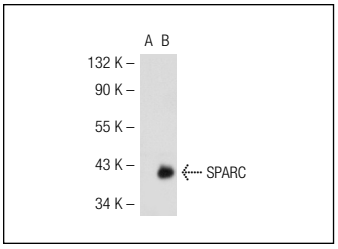
STORAGE

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

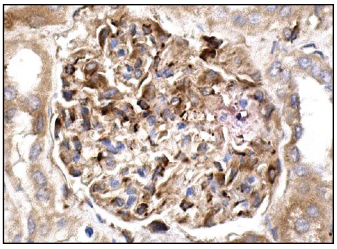
RESEARCH USE

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

DATA



SPARC (H-90): sc-25574. Western blot analysis of SPARC expression in non-transfected: sc-117752 (**A**) and human SPARC transfected: sc-111589 (**B**) 293T whole cell lysates.



SPARC (H-90): sc-25574. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomerulus and tubules.

SELECT PRODUCT CITATIONS

1. Berquin, I., et al. 2005. Expression signature of the mouse prostate. J. Biol. Chem. 280: 36442-36451.
2. Lee, Y.H., et al. 2010. Enhancement of osteoblast biocompatibility on titanium surface with Terrein treatment. Cell Biochem. Funct. 28: 678-685.
3. Karaoz, E., et al. 2010. Isolation and characterization of stem cells from pancreatic islet: pluripotency, differentiation potential and ultrastructural characteristics. Cytotherapy 12: 288-302.
4. Karaöz, E., et al. 2011. A comprehensive characterization study of human bone marrow mscs with an emphasis on molecular and ultrastructural properties. J. Cell. Physiol. 226: 1367-1382.
5. Ho, T.T., et al. 2011. RhoGDIα-dependent balance between RhoA and RhoC is a key regulator of cancer cell tumorigenesis. Mol. Biol. Cell 22: 3263-3275.
6. Adas, G., et al. 2011. Mesenchymal stem cells improve the healing of ischemic colonic anastomoses (experimental study). Langenbecks Arch. Surg. 396: 115-126.
7. Ferlin, A., et al. 2011. Profiling Insulin like factor 3 (INSL3) signaling in human osteoblasts. PLoS ONE 6: e29733.
8. Karaoz, E., et al. 2012. Reduction of lesion in injured rat spinal cord and partial functional recovery of motility after bone marrow derived mesenchymal stem cell transplantation. Turk. Neurosurg. 22: 207-217.
9. Chen, A.E., et al. 2013. Functional evaluation of ES cell-derived endodermal populations reveals differences between Nodal and Activin A-guided differentiation. Development 140: 675-686.