

# SPARC (C-15): sc-13324

## 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.

## REFERENCES

1. Termine, J.D., et al. 1981. Osteonectin, a bone-specific protein linking mineral to collagen. *Cell* 26: 99-105.
2. Findlay, D.M., et al. 1988. Isolation of the osteonectin gene: evidence that a variable region of the osteonectin molecule is encoded within one exon. *Biochemistry* 27: 1483-1489.

## CHROMOSOMAL LOCATION

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

## SOURCE

SPARC (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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.

Blocking peptide available for competition studies, sc-13324 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SPARC (C-15) is recommended for detection of SPARC of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SPARC (C-15) is also recommended for detection of SPARC in additional species, including equine, canine, bovine, porcine and avian.

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

Molecular Weight of SPARC: 43 kDa.

Positive Controls: A-375 cell lysate: sc-3811, A549 cell lysate: sc-2413 or U-2 OS cell lysate: sc-2295.

## 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) 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.

## SELECT PRODUCT CITATIONS

1. Turhani, D., et al. 2005. Analysis of cell-seeded 3-dimensional bone constructs manufactured *in vitro* with hydroxyapatite granules obtained from red algae. *J. Oral. Maxillofac. Surg.* 63: 673-681.
2. Khwaja, F.W., et al. 2006. Proteomic identification of the wt-p53-regulated tumor cell secretome. *Oncogene* 25: 7650-7661.
3. Wanschitz, F., et al. 2007. Expression patterns of Ets2 protein correlate with bone-specific proteins in cell-seeded three-dimensional bone constructs. *Cells Tissues Organs.* 186: 213-220.
4. Jugdutt, B.I., et al. 2009. Role of healing-specific-matrical proteins and matrix metalloproteinases in age-related enhanced early remodeling after reperfused STEMI in dogs. *Mol. Cell. Biochem.* 322: 25-36.
5. Sutter, W., et al. 2009. Effect of different biomaterials on the expression pattern of the transcription factor Ets2 in bone-like constructs. *J. Craniomaxillofac. Surg.* 37: 263-271.
6. Horn, M.A., et al. 2012. Age-related divergent remodeling of the cardiac extracellular matrix in heart failure: Collagen accumulation in the young and loss in the aged. *J. Mol. Cell. Cardiol.* 53: 82-90.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **SPARC (D-2): sc-398419** or **SPARC (AON-1): sc-33645**, our highly recommended monoclonal alternatives to SPARC (C-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SPARC (D-2): sc-398419**.