

SPARC (D-2): sc-398419

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.

SOURCE

SPARC (D-2) is a mouse monoclonal antibody raised against amino acids 1-90 of SPARC of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SPARC (D-2) is available conjugated to agarose (sc-398419 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398419 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398419 PE), fluorescein (sc-398419 FITC), Alexa Fluor® 488 (sc-398419 AF488), Alexa Fluor® 546 (sc-398419 AF546), Alexa Fluor® 594 (sc-398419 AF594) or Alexa Fluor® 647 (sc-398419 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398419 AF680) or Alexa Fluor® 790 (sc-398419 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

SPARC (D-2) is recommended for detection of SPARC of 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), 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 SPARC siRNA (h): sc-37166, SPARC shRNA Plasmid (h): sc-37166-SH and SPARC shRNA (h) Lentiviral Particles: sc-37166-V.

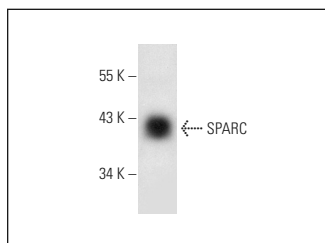
Molecular Weight of SPARC: 43 kDa.

Positive Controls: A-375 cell lysate: sc-3811.

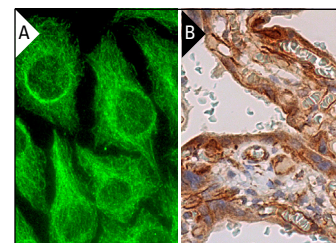
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SPARC (D-2): sc-398419. Western blot analysis of SPARC expression in A-375 whole cell lysate.



SPARC (D-2): sc-398419. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells and cytoplasmic and membrane staining of endothelial cells (B).

SELECT PRODUCT CITATIONS

- Yan, L., et al. 2017. Insulin-like growth factor-1 promotes the proliferation and odontoblastic differentiation of human dental pulp cells under high glucose conditions. *Int. J. Mol. Med.* 40: 1253-1260.
- Galván, J.A., et al. 2020. Immunohistochemical analysis of the expression of cancer-associated fibroblast markers in esophageal cancer with and without neoadjuvant therapy. *Virchows Arch.* 476: 725-734.
- Yao, L., et al. 2021. Bi-directional epithelial-mesenchymal crosstalk provides self-sustaining pro-fibrotic signals in pulmonary fibrosis. *J. Biol. Chem.* E-published.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.