

SMOC-1 (A-10): sc-390448

BACKGROUND

SMOC-1 (SPARC-related modular calcium-binding protein-1) is a secreted modular calcium-binding protein found in the extracellular space in or around the basement membrane. SMOC-1 is a member of the BM-40 family and contains two EF-hand domains, one Kazal-like domain and two thyroglobulin type-1 domains. The BM-40 family has been implicated with tissue remodeling, angiogenesis and bone mineralization. In embryonic stage day 12, and fetal stages day 14, 16 and 18, the SMOC-1 protein is present in the basement membrane zones of brain, blood vessels, skin, skeletal muscle, lung, heart, liver, pancreas, ovary, intestine and kidney. This broad and organ-specific distribution suggests multifunctional roles of SMOC-1 during embryogenesis.

REFERENCES

1. Vannahme, C., et al. 2002. Characterization of SMOC-1, a novel modular calcium-binding protein in basement membranes. *J. Biol. Chem.* 277: 37977-37986.
2. Vannahme, C., et al. 2003. Characterization of SMOC-2, a modular extracellular calcium-binding protein. *Biochem. J.* 373: 805-814.
3. Srivastava, J., et al. 2006. Transcriptional status of known and novel genes tagged with consensus of 33.15 repeat loci employing minisatellite-associated sequence amplification (MASA) and real-time PCR in water buffalo, *Bubalus bubalis*. *DNA Cell Biol.* 25: 31-48.
4. Gersdorff, N., et al. 2006. Secreted modular calcium-binding protein-1 localization during mouse embryogenesis. *Histochem. Cell Biol.* 126: 705-712.

CHROMOSOMAL LOCATION

Genetic locus: SMOC1 (human) mapping to 14q24.2; Smoc1 (mouse) mapping to 12 D1.

SOURCE

SMOC-1 (A-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 300-314 within an internal region of SMOC-1 of human origin.

PRODUCT

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

SMOC-1 (A-10) is available conjugated to agarose (sc-390448 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390448 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390448 PE), fluorescein (sc-390448 FITC), Alexa Fluor® 488 (sc-390448 AF488), Alexa Fluor® 546 (sc-390448 AF546), Alexa Fluor® 594 (sc-390448 AF594) or Alexa Fluor® 647 (sc-390448 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390448 AF680) or Alexa Fluor® 790 (sc-390448 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390448 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

SMOC-1 (A-10) is recommended for detection of SMOC-1 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).

Suitable for use as control antibody for SMOC-1 siRNA (h): sc-63044, SMOC-1 siRNA (m): sc-63045, SMOC-1 shRNA Plasmid (h): sc-63044-SH, SMOC-1 shRNA Plasmid (m): sc-63045-SH, SMOC-1 shRNA (h) Lentiviral Particles: sc-63044-V and SMOC-1 shRNA (m) Lentiviral Particles: sc-63045-V.

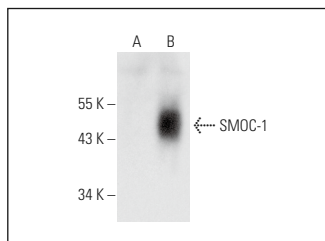
Molecular Weight of SMOC-1: 48 kDa.

Positive Controls: SMOC-1 (h): 293 Lysate: sc-110902 or HeLa whole cell lysate: sc-2200.

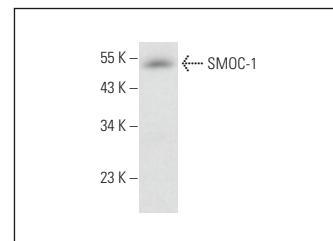
RECOMMENDED SUPPORT REAGENTS

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



SMOC-1 (A-10): sc-390448. Western blot analysis of SMOC-1 expression in non-transfected: sc-110760 (A) and human SMOC-1 transfected: sc-110902 (B) 293 whole cell lysates.



SMOC-1 (A-10): sc-390448. Western blot analysis of SMOC-1 expression in HeLa whole cell lysate.

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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