

SMOC-1 (C-2): sc-133235

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

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- Vannahme, C., et al. 2003. Characterization of SMOC-2, a modular extracellular calcium-binding protein. *Biochem. J.* 373: 805-814.
- 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.
- Gersdorff, N., et al. 2006. Secreted modular calcium-binding protein-1 localization during mouse embryogenesis. *Histochem. Cell Biol.* 126: 705-712.
- Srivastava, J., et al. 2007. Characterization of SMOC-1 uncovers two transcript variants showing differential tissue and age specific expression in *Bubalus bubalis*. *BMC Genomics* 8: 436-436.
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CHROMOSOMAL LOCATION

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

SOURCE

SMOC-1 (C-2) is a mouse monoclonal antibody raised against amino acids 285-330 mapping within an internal region of SMOC-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

SMOC-1 (C-2) 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.

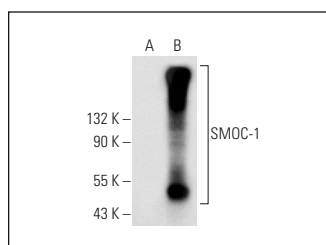
Molecular Weight of SMOC-1: 54 kDa.

Positive Controls: SMOC-1 (h): 293 Lysate: sc-110902, mouse ovary extract: sc-2404 or A-431 whole cell lysate: sc-2201.

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 (C-2): sc-133235. 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.

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.