

SMOC-1 (N-16): sc-55289

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

- Vannahme, C., et al. 2002. Characterization of SMOC-1, a novel modular calcium-binding protein in basement membranes. *J. Biol. Chem.* 277: 37977-37986.
- 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.
- Sherva, R., et al. 2007. A whole genome scan for pulse pressure/stroke volume ratio in African Americans: the HyperGEN study. *Am. J. Hypertens.* 20: 398-402.

CHROMOSOMAL LOCATION

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

SOURCE

SMOC-1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SMOC-1 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-55289 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

PROTOCOLS

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

APPLICATIONS

SMOC-1 (N-16) is recommended for detection of SMOC-1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SMOC-1 (N-16) is also recommended for detection of SMOC-1 in additional species, including canine and bovine.

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.

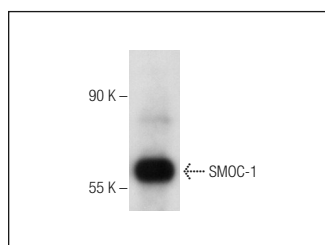
Molecular Weight of SMOC-1: 48 kDa.

Positive Controls: mouse ovary extract: sc-2404, rat ovary extract: sc-2399 or A-431 whole cell lysate: sc-2201.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



SMOC-1 (N-16): sc-55289. Western blot analysis of SMOC-1 expression in rat ovary tissue extract.

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.