

SMOC-2 (Y-17): sc-55296

BACKGROUND

SMOC-2 (SPARC-related modular calcium-binding protein-2), also known as SMAP2, MST117, MSTP117 or MSTP140, is a secreted modular calcium-binding glycoprotein found in the extracellular space. SMOC-2 is a member of the SPARC/BM-40 family and contains two EF-hand domains, one Kazal-like domain and two Thyroglobulin type 1 domains. The SPARC/BM-40 family has been implicated in tissue remodeling, angiogenesis and bone mineralization. SMOC-2 is a widely expressed protein with highest expression levels found in spleen, ovary, muscle and heart tissues. SMOC-2 may interact directly with VEGF or FGF and is believed to participate in angiogenic activity, cell proliferation and migration. In addition, SMOC-2 is required for efficient growth factor-induced DNA synthesis, and its overexpression greatly stimulates DNA synthesis. For this reason, SMOC-2 is a potential target for antiangiogenic therapies.

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.
- Rocnik, E.F., et al. 2006. The novel SPARC family member SMOC-2 potentiates angiogenic growth factor activity. *J. Biol. Chem.* 281: 22855-22864.
- 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. 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.
- Sosnoski, D.M. and Gay, C.V. 2007. Evaluation of bone-derived and marrow-derived vascular endothelial cells by microarray analysis. *J. Cell. Biochem.* 102: 463-472.

CHROMOSOMAL LOCATION

Genetic locus: *Smoc2* (mouse) mapping to 17 A2.

SOURCE

SMOC-2 (Y-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SMOC-2 of mouse 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-55296 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SMOC-2 (Y-17) is recommended for detection of SMOC-2 of mouse and rat 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-2 (Y-17) is also recommended for detection of SMOC-2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for SMOC-2 siRNA (m): sc-63047, SMOC-2 shRNA Plasmid (m): sc-63047-SH and SMOC-2 shRNA (m) Lentiviral Particles: sc-63047-V.

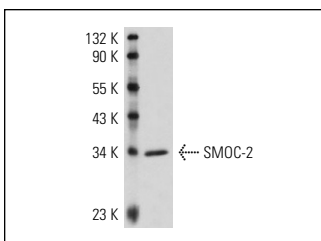
Molecular Weight of SMOC-2: 54 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, A-10 cell lysate: sc-3806 or mouse heart extract: sc-2254.

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-2 (Y-17): sc-55296. Western blot analysis of human recombinant SMOC-2.

STORAGE

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

PROTOCOLS

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