

SAMD1 (S-20): sc-244060

BACKGROUND

SAMD1 (sterile α motif domain containing 1), also known as Atherin, is a 538 amino acid secreted protein that contains one SAM (sterile α motif) domain. Amino acid sequences in SAMD1 shows extensive sequence conservation of the full-length sequences for human and rabbit SAMD1. SAMD1 is present only in atherosclerotic lesions, not in normal intima. Within lesions, SAMD1 is found both in the extracellular compartment and within foam cells. SAMD1 may play a role in atherogenesis by immobilizing LDL in the arterial wall. The SAMD1 gene maps to human chromosome 19p13.12. Chromosome 19 consists of approximately 63 million bases and makes up over 2% of human genomic DNA. Chromosome 19 includes a diversity of interesting genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin superfamily members including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family, and Fc α receptors. Key genes for eye color and hair color also map to chromosome 19.

REFERENCES

1. Trettel, F., et al. 2000. A fine physical map of the CACNA1A gene region on 19p13.1-p13.2 chromosome. *Gene* 241: 45-50.
2. Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.
3. Lees, A.M., et al. 2005. Atherin: a newly identified, lesion-specific, LDL-binding protein in human atherosclerosis. *Atherosclerosis* 182: 219-230.
4. Baptista, J., et al. 2005. Molecular cytogenetic analyses of breakpoints in apparently balanced reciprocal translocations carried by phenotypically normal individuals. *Eur. J. Hum. Genet.* 13: 1205-1212.
5. Lopez-Coviella, I., et al. 2006. Developmental pattern of expression of BMP receptors and Smads and activation of Smad1 and Smad5 by BMP9 in mouse basal forebrain. *Brain Res.* 1088: 49-56.
6. Jensen, D.R., et al. 2009. A novel chromosome 19p13.12 deletion in a child with multiple congenital anomalies. *Am. J. Med. Genet. A* 149A: 396-402.

CHROMOSOMAL LOCATION

Genetic locus: SAMD1 (human) mapping to 19p13.12; Samd1 (mouse) mapping to 8 C3.

SOURCE

SAMD1 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SAMD1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-244060 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SAMD1 (S-20) is recommended for detection of SAMD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SAMD1 (S-20) is also recommended for detection of SAMD1 in additional species, including canine and porcine.

Suitable for use as control antibody for SAMD1 siRNA (h): sc-97245, SAMD1 siRNA (m): sc-153201, SAMD1 shRNA Plasmid (h): sc-97245-SH, SAMD1 shRNA Plasmid (m): sc-153201-SH, SAMD1 shRNA (h) Lentiviral Particles: sc-97245-V and SAMD1 shRNA (m) Lentiviral Particles: sc-153201-V.

Molecular Weight of SAMD1: 56 kDa.

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) 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.

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.

PROTOCOLS

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