

# SAMD4B (C-12): sc-161206

## BACKGROUND

The sterile  $\alpha$  motif (SAM) domain is a 70 residue structure found in a large number of proteins involved in diverse processes present throughout eukaryotes. The SAM domain is known to bind RNA and is arranged in a small five-helix bundle with two large interfaces. SAMD4B (sterile  $\alpha$  motif domain containing 4B), also known as SMGB or hSmaug2, is a 694 amino acid protein that contains one SAM domain and belongs to the SMAUG family. SAMD4B is encoded by a gene located on human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

## REFERENCES

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- Smalla, M., et al. 1999. Solution structure of the receptor tyrosine kinase EphB2 SAM domain and identification of two distinct homotypic interaction sites. *Protein Sci.* 8: 1954-1961.
- Buchet-Poyau, K., et al. 2002. Search for the second Peutz-Jeghers syndrome locus: exclusion of the STK13, PRKCG, KLK10, and PSCD2 genes on chromosome 19 and the STK11P gene on chromosome 2. *Cytogenet. Genome Res.* 97: 171-178.
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- Kim, C.A. and Bowie, J.U. 2003. SAM domains: uniform structure, diversity of function. *Trends Biochem. Sci.* 28: 625-628.
- Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.

## CHROMOSOMAL LOCATION

Genetic locus: SAMD4B (human) mapping to 19q13.2; Samd4b (mouse) mapping to 7 A3.

## SOURCE

SAMD4B (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SAMD4B of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-161206 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SAMD4B (C-12) is recommended for detection of SAMD4B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); non cross-reactive with SAMD4A.

SAMD4B (C-12) is also recommended for detection of SAMD4B in additional species, including equine and canine.

Suitable for use as control antibody for SAMD4B siRNA (h): sc-97384, SAMD4B siRNA (m): sc-153208, SAMD4B shRNA Plasmid (h): sc-97384-SH, SAMD4B shRNA Plasmid (m): sc-153208-SH, SAMD4B shRNA (h) Lentiviral Particles: sc-97384-V and SAMD4B shRNA (m) Lentiviral Particles: sc-153208-V.

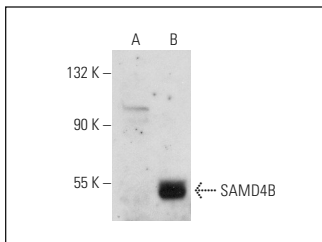
Molecular Weight of SAMD4B: 75 kDa.

Positive Controls: SAMD4B (m): 293T Lysate: sc-127507.

## 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



SAMD4B (C-12): sc-161206. Western blot analysis of SAMD4B expression in non-transfected: sc-117752 (A) and mouse SAMD4B transfected: sc-127507 (B) 293T whole cell lysates.

## 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.