# SANTA CRUZ BIOTECHNOLOGY, INC.

# SAMD4B (T-12): sc-161208



# 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 fivehelix 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 (lg) superfamily members, including the killer cell and leukocyte lg-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

# REFERENCES

- Zimmermann, W., et al. 1988. Chromosomal localization of the carcinoembryonic antigen gene family and differential expression in various tumors. Cancer Res. 48: 2550-2554.
- Stapleton, D., et al. 1999. The crystal structure of an Eph receptor SAM domain reveals a mechanism for modular dimerization. Nat. Struct. Biol. 6: 44-49.
- 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 STK11IP gene on chromosome 2. Cytogenet. Genome Res. 97: 171-178.
- Moodie, S.J., et al. 2002. Analysis of candidate genes on chromosome 19 in coeliac disease: an association study of the KIR and LILR gene clusters. Eur. J. Immunogenet. 29: 287-291.
- 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 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SAMD4B of human origin.

# PRODUCT

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

Blocking peptide available for competition studies, sc-161208 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### APPLICATIONS

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

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.

# **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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: 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<sup>™</sup> 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.