

SAMD12 (P-14): sc-87416

BACKGROUND

The sterile α motif (SAM) domain is a 70 residue structure found in a large number of proteins involved in diverse processes present throughout the eukaryotes. The SAM domain is known to bind RNA and is arranged in a small five-helix bundle with two large interfaces. SAMD12 (sterile α motif domain-containing protein 12), is a 201 amino acid protein encoded by the SAMD12 gene which maps to human chromosome 8. Consisting of nearly 146 million base pairs, chromosome 8 encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that maps to chromosome 8.

REFERENCES

- Schultz, J., Ponting, C.P., Hofmann, K. and Bork, P. 1997. SAM as a protein interaction domain involved in developmental regulation. *Protein Sci.* 6: 249-253.
- Wildenauer, D.B. and Schwab, S.G. 1999. Chromosomes 8 and 10 workshop. *Am. J. Med. Genet.* 88: 239-243.
- Stapleton, D., Balan, I., Pawson, T. and Sicheri, F. 1999. The crystal structure of an Eph receptor SAM domain reveals a mechanism for modular dimerization. *Nat. Struct. Biol.* 6: 44-49.
- Smalla, M., Schmieder, P., Kelly, M., Ter Laak, A., Krause, G., Ball, L., Wahl, M., Bork, P. and Oschkinat, H. 1999. Solution structure of the receptor tyrosine kinase EphB2 SAM domain and identification of two distinct homotypic interaction sites. *Protein Sci.* 8: 1954-1961.
- Kim, C.A. and Bowie, J.U. 2003. SAM domains: uniform structure, diversity of function. *Trends Biochem. Sci.* 28: 625-628.

CHROMOSOMAL LOCATION

Genetic locus: SAMD12 (human) mapping to 8q24.12; Samd12 (mouse) mapping to 15 C.

SOURCE

SAMD12 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SAMD12 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-87416 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

SAMD12 (P-14) is recommended for detection of SAMD12 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 SAMD7 or SAMD10.

SAMD12 (P-14) is also recommended for detection of SAMD12 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for SAMD12 siRNA (h): sc-77738, SAMD12 siRNA (m): sc-153204, SAMD12 shRNA Plasmid (h): sc-77738-SH, SAMD12 shRNA Plasmid (m): sc-153204-SH, SAMD12 shRNA (h) Lentiviral Particles: sc-77738-V and SAMD12 shRNA (m) Lentiviral Particles: sc-153204-V.

Molecular Weight of SAMD12: 23 kDa.

Positive Controls: PC-3 nuclear extract: sc-2152 or A-431 nuclear extract: sc-2122.

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.

PROTOCOLS

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



Try **SAMD12 (A-6): sc-377123**, our highly recommended monoclonal alternative to SAMD12 (P-14).