

SAMD4B (m): 293T Lysate: sc-127507

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 eukaryotes. The SAM domain is known to bind RNA and is arranged in a small five-helix bundle with two large interfaces. SAMD4B (sterile α 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

1. Zimmermann, W., Weber, B., Ortlieb, B., Rudert, F., Schempp, W., Fiebig, H.H., Shively, J.E., von Kleist, S. and Thompson, J.A. 1988. Chromosomal localization of the carcinoembryonic antigen gene family and differential expression in various tumors. *Cancer Res.* 48: 2550-2554.
2. Stapleton, D., Balan, I., Pawson and T., Sicheri, F. 1999. The crystal structure of an Eph receptor SAM domain reveals a mechanism for modular dimerization. *Nat. Struct. Biol.* 6: 44-49.
3. Smalla, M., Schmieder, P., Kelly, M., Ter Laak, A., Krause, G., Ball, L., Wahl, M., Bork and P., 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.
4. Buchet-Poyau, K., Mehenni, H., Radhakrishna, U. and Antonarakis, S.E. 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.
5. Moodie, S.J., Norman, P.J., King, A.L., Fraser, J.S., Curtis, D., Ellis, H.J., Vaughan, R.W. and Ciclitira, P.J. 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.
6. Kim, C.A. and Bowie, J.U. 2003. SAM domains: uniform structure, diversity of function. *Trends Biochem. Sci.* 28: 625-628.
7. Grimwood, J., Gordon, L.A., Olsen, A., Terry, A., Schmutz, J., Lamerdin, J., Hellsten, U., Goodstein, D., Couronne, O., Tran-Gyamfi, M., Aerts, A., Altherr, M., Ashworth, L., Bajorek, E., Black, S., Branscomb, E., Caenepeel, S., Carrano, A., et al. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Samd4b (mouse) mapping to 7 A3.

PRODUCT

SAMD4B (m): 293T Lysate represents a lysate of mouse SAMD4B transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

SAMD4B (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive SAMD4B antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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