

SAMD3 (S-19): sc-169248

BACKGROUND

SAMD3 (sterile α motif domain-containing protein 3) is a 520 amino acid protein that contains one SAM (sterile alpha motif) domain. Existing as two alternatively spliced isoforms, the SAMD3 gene is conserved in chimpanzee, canine, bovine and mouse, and maps to human chromosome 6q23.1. The medulloblastoma cell line DAOY has a homozygous deletion on chromosome 6 that disrupts three genes: SAMD3, L3MBTL3 and TMEM200A. This region of chromosome 6 has been identified as a significant region of loss in medulloblastoma. Making up nearly 6% of the human genome, chromosome 6 contains around 1,200 genes within 170 million base pairs of sequence. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer suggesting the presence of a cancer susceptibility locus. A bipolar disorder susceptibility locus has also been identified on the q arm of chromosome 6.

REFERENCES

1. Trent, J.M., et al. 1990. Tumorigenicity in human melanoma cell lines controlled by introduction of human chromosome 6. *Science* 247: 568-571.
2. Millikin, D., et al. 1991. Loss of heterozygosity for loci on the long arm of chromosome 6 in human malignant melanoma. *Cancer Res.* 51: 5449-5453.
3. Mungall, A.J., et al. 2003. The DNA sequence and analysis of human chromosome 6. *Nature* 425: 805-811.
4. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. *Am. J. Hum. Genet.* 77: 582-595.
5. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. *Genes Chromosomes Cancer* 47: 159-164.
6. Northcott, P.A., et al. 2009. Multiple recurrent genetic events converge on control of histone lysine methylation in medulloblastoma. *Nat. Genet.* 41: 465-472.

CHROMOSOMAL LOCATION

Genetic locus: SAMD3 (human) mapping to 6q23.1; Samd3 (mouse) mapping to 10 A4.

SOURCE

SAMD3 (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SAMD3 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-169248 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.

APPLICATIONS

SAMD3 (S-19) is recommended for detection of SAMD3 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 other SAMD family members.

SAMD3 (S-19) is also recommended for detection of SAMD3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SAMD3 siRNA (h): sc-95602, SAMD3 siRNA (m): sc-153206, SAMD3 shRNA Plasmid (h): sc-95602-SH, SAMD3 shRNA Plasmid (m): sc-153206-SH, SAMD3 shRNA (h) Lentiviral Particles: sc-95602-V and SAMD3 shRNA (m) Lentiviral Particles: sc-153206-V.

Molecular Weight of SAMD3 isoform 1: 61 kDa.

Molecular Weight of SAMD3 isoform 2: 25 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.

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.