SANTA CRUZ BIOTECHNOLOGY, INC.

SAMD14 (S-13): sc-136847

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. SAMD14 (sterile α motif domain-containing protein 14) is a 417 amino acid protein encoded by the SAMD14 gene which maps to human chromosome 17. Chromosome 17 makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Chromosome 17 is also linked to neurofibromatosis, a condition characterized by neural and epidermal lesions, and dysregulated Schwann cell growth, Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease.

REFERENCES

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2. Prusiner, S.B. 1998. The prion diseases. Brain Pathol. 8: 499-513.
3. 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.
4. Collins, S., et al. 2001. Gerstmann-Sträussler-Scheinker syndrome,fatal familial insomnia, and kuru: a review of these less common human transmissible spongiform encephalopathies. J. Clin. Neurosci. 8: 387-397.
5. Kim, C.A. and Bowie, J.U. 2003. SAM domains: uniform structure, diversity of function. Trends Biochem. Sci. 28: 625-628.
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7. Joó, J.G., et al. 2006. Trisomy 20 mosaicism and nonmosaic trisomy 20: a report of 2 cases. J. Reprod. Med. 51: 209-212.
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CHROMOSOMAL LOCATION

Genetic locus: SAMD14 (human) mapping to 17q21.33; Samd14 (mouse) mapping to 11 D.

SOURCE

SAMD14 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SAMD14 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136847 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SAMD14 (S-13) is recommended for detection of SAMD14 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 other SAMD family members.

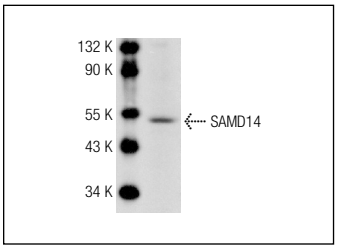
Suitable for use as control antibody for SAMD14 siRNA (h): sc-94214, SAMD14 siRNA (m): sc-153205, SAMD14 shRNA Plasmid (h): sc-94214-SH, SAMD14 shRNA Plasmid (m): sc-153205-SH, SAMD14 shRNA (h) Lentiviral Particles: sc-94214-V and SAMD14 shRNA (m) Lentiviral Particles: sc-153205-V.

Positive Controls: mouse brain extract: sc-2253.

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



SAMD14 (S-13): sc-136847. Western blot analysis of SAMD14 expression in mouse brain tissue extract.

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.