

SAMD4A (E-14): sc-163329

BACKGROUND

Sterile α motifs (SAMs) in proteins such as SAMD4A are part of an RNA-binding domain that functions as a posttranscriptional regulator by binding to an RNA sequence motif known as the Smaug recognition element, which was named after the *Drosophila* Smaug protein. SAMD4A (sterile α motif domain-containing protein 4A) is a 718 amino acid protein that contains one SAM (sterile α motif) domain and belongs to the SMAUG family. SAMD4A shuttles between the nucleus and the cytoplasm in a CRM1-dependent manner. Colocalizing throughout the cytoplasm in granules with polyadenylated RNAs, PABPC1 and STAU1, SAMD4A also frequently colocalizes in cytoplasmic stress granule-like foci with ELAVL1, TIA1 and TIAL1. Existing as three alternatively spliced isoforms, the SAMD4A gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 14q22.2.

REFERENCES

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3. Baez, M.V., et al. 2005. Mammalian Smaug is a translational repressor that forms cytoplasmic foci similar to stress granules. J. Biol. Chem. 280: 43131-43140.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610747. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Hayashi, S., et al. 2008. Heterozygous deletion at 14q22.1-q22.3 including the BMP4 gene in a patient with psychomotor retardation, congenital corneal opacity and feet polysyndactyly. Am. J. Med. Genet. A 146A: 2905-2910.
6. Reich, H.N., et al. 2010. A molecular signature of proteinuria in glomerulonephritis. PLoS ONE 5: e13451.
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CHROMOSOMAL LOCATION

Genetic locus: SAMD4A (human) mapping to 14q22.2; Samd4 (mouse) mapping to 14 C1.

SOURCE

SAMD4A (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SAMD4A 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-163329 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SAMD4A (E-14) is recommended for detection of SAMD4A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 SAMD4B.

SAMD4A (E-14) is also recommended for detection of SAMD4A in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SAMD4A siRNA (h): sc-92315, SAMD4A siRNA (m): sc-153207, SAMD4A shRNA Plasmid (h): sc-92315-SH, SAMD4A shRNA Plasmid (m): sc-153207-SH, SAMD4A shRNA (h) Lentiviral Particles: sc-92315-V and SAMD4A shRNA (m) Lentiviral Particles: sc-153207-V.

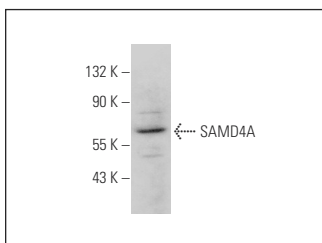
Molecular Weight of SAMD4A isoforms 1/2/3: 79/68/70 kDa.

Positive Controls: mouse heart extract: sc-2254.

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



SAMD4A (E-14): sc-163329. Western blot analysis of SAMD4A expression in mouse heart 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.