

# SAMD8 (N-13): sc-139050

## BACKGROUND

SAMD8 (sterile  $\alpha$  motif domain-containing protein 8), also known as sphingomyelin synthase-related protein 1, is a 415 amino acid multi-pass membrane protein that contains one SAM (sterile  $\alpha$  motif) domain and belongs to the sphingomyelin synthase family. The SAMD8 protein contains five membrane-spanning  $\alpha$  helices connected by hydrophilic extra-membrane loops. SAMD8 also contains four highly conserved motifs, designated D1 to D4. Existing as two alternatively spliced isoforms, the SAMD8 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito and *C. elegans*, and maps to human chromosome 10q22.2. Spanning nearly 135 million base pairs, chromosome 10 makes up approximately 4.5% of total DNA in cells and encodes nearly 1,200 genes. Several protein-coding genes, including those that encode for chemokines, cadherins, excision repair proteins, early growth response factors (Egrs) and fibroblast growth receptors (FGFRs), are located on chromosome 10.

## REFERENCES

- Jabs, E.W., et al. 1994. Jackson-Weiss and Crouzon syndromes are allelic with mutations in fibroblast growth factor receptor 2. *Nat. Genet.* 8: 275-279.
- Deloukas, P., et al. 2000. Report of the third international workshop on human chromosome 10 mapping and sequencing 1999. *Cytogenet. Cell Genet.* 90: 1-12.
- Gilbert, F. 2001. Chromosome 10. *Genet. Test.* 5: 69-82.
- Huitema, K., et al. 2004. Identification of a family of animal sphingomyelin synthases. *EMBO J.* 23: 33-44.
- Deloukas, P., et al. 2004. The DNA sequence and comparative analysis of human chromosome 10. *Nature* 429: 375-381.
- Grupe, A., et al. 2006. A scan of chromosome 10 identifies a novel locus showing strong association with late-onset Alzheimer disease. *Am. J. Hum. Genet.* 78: 78-88.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611575. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Chouery, E., et al. 2011. A whole-genome scan in a large family with leukodystrophy and oligodontia reveals linkage to 10q22. *Neurogenetics* 12: 73-78.

## CHROMOSOMAL LOCATION

Genetic locus: SAMD8 (human) mapping to 10q22.2; Samd8 (mouse) mapping to 14 A3.

## SOURCE

SAMD8 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SAMD8 of human origin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-139050 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SAMD8 (N-13) is recommended for detection of SAMD8 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.

SAMD8 (N-13) is also recommended for detection of SAMD8 in additional species, including equine, bovine, porcine and avian.

Suitable for use as control antibody for SAMD8 siRNA (h): sc-90448, SAMD8 siRNA (m): sc-153211, SAMD8 shRNA Plasmid (h): sc-90448-SH, SAMD8 shRNA Plasmid (m): sc-153211-SH, SAMD8 shRNA (h) Lentiviral Particles: sc-90448-V and SAMD8 shRNA (m) Lentiviral Particles: sc-153211-V.

Molecular Weight of SAMD8 isoforms: 48/38 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](http://www.scbt.com) or our catalog for detailed protocols and support products.