# SAMD5 (V-15): sc-248533



The Power to Question

#### **BACKGROUND**

SAMD5 (sterile  $\alpha$  motif domain-containing protein 5) is a 173 amino acid protein that contains one SAM (sterile  $\alpha$  motif) domain. The SAMD5 gene is conserved in chimpanzee, bovine, mouse, rat, chicken, zebrafish and mosquito, and maps to human chromosome 6g24.3. 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. Porphyria cutanea tarda is associated with chromosome 6 through the HFE gene which, when mutated, predisposes an individual to developing this porphyria. Notably, the PARK2 gene, which is associated with Parkinson's disease, and the genes encoding the major histocompatiblity complex proteins, which are key molecular components of the immune system and determine predisposition to rheumatic diseases, are also located on chromosome 6. Stickler syndrome, 21-hydroxylase deficiency and maple syrup urine disease are also associated with genes on chromosome 6. A bipolar disorder susceptibility locus has been identified on the q arm of chromosome 6.

# **REFERENCES**

- 1. Mungall, A.J., et al. 2003. The DNA sequence and analysis of human chromosome 6. Nature 425: 805-811.
- Vuoristo, M.M., et al. 2004. A stop codon mutation in COL11A2 induces exon skipping and leads to non-ocular Stickler syndrome. Am. J. Med. Genet. A 130A: 160-164.
- 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.
- 4. Safadi, S.S., et al. 2007. A disease state mutation unfolds the parkin ubiquitin-like domain. Biochemistry 46: 14162-14169.
- 5. Olsson, K.S., et al. 2007. The HLA-A1-B8 haplotype hitchhiking with the hemochromatosis mutation: does it affect the phenotype? Eur. J. Haematol. 79: 429-434.
- Park, E., et al. 2007. Modulation of parkin gene expression in noradrenergic neuronal cells. Int. J. Dev. Neurosci. 25: 491-497.
- 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.

# **CHROMOSOMAL LOCATION**

Genetic locus: SAMD5 (human) mapping to 6q24.3; Samd5 (mouse) mapping to 10 A1.

#### SOURCE

SAMD5 (V-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SAMD5 of human origin.

#### **PRODUCT**

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

Blocking peptide available for competition studies, sc-248533 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

SAMD5 (V-15) is recommended for detection of SAMD5 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.

SAMD5 (V-15) is also recommended for detection of SAMD5 in additional species, including bovine, porcine and avian.

Suitable for use as control antibody for SAMD5 siRNA (h): sc-95607, SAMD5 siRNA (m): sc-153209, SAMD5 shRNA Plasmid (h): sc-95607-SH, SAMD5 shRNA Plasmid (m): sc-153209-SH, SAMD5 shRNA (h) Lentiviral Particles: sc-95607-V and SAMD5 shRNA (m) Lentiviral Particles: sc-153209-V.

Molecular Weight of SAMD5: 19 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.

## **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.

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