

# SAMD12 (A-6): sc-377123

## BACKGROUND

The sterile  $\alpha$  motif (SAM) domain is a 70 residue structure found in a large number of proteins involved in diverse processes present throughout the eukaryotes. The SAM domain is known to bind RNA and is arranged in a small five-helix bundle with two large interfaces. SAMD12 (sterile  $\alpha$  motif domain-containing protein 12), is a 201 amino acid protein encoded by the SAMD12 gene which maps to human chromosome 8q24.12. Consisting of nearly 146 million base pairs, chromosome 8 encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that maps to chromosome 8.

## REFERENCES

- Schultz, J., et al. 1997. SAM as a protein interaction domain involved in developmental regulation. *Protein Sci.* 6: 249-253.
- Wildenauer, D.B. and Schwab, S.G. 1999. Chromosomes 8 and 10 workshop. *Am. J. Med. Genet.* 88: 239-243.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: SAMD12 (human) mapping to 8q24.12; Samd12 (mouse) mapping to 15 C.

## SOURCE

SAMD12 (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-29 near the N-terminus of SAMD12 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SAMD12 (A-6) is available conjugated to agarose (sc-377123 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377123 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377123 PE), fluorescein (sc-377123 FITC), Alexa Fluor<sup>®</sup> 488 (sc-377123 AF488), Alexa Fluor<sup>®</sup> 546 (sc-377123 AF546), Alexa Fluor<sup>®</sup> 594 (sc-377123 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-377123 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-377123 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-377123 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377123 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

SAMD12 (A-6) is recommended for detection of SAMD12 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

SAMD12 (A-6) is also recommended for detection of SAMD12 in additional species, including bovine.

Suitable for use as control antibody for SAMD12 siRNA (h): sc-77738, SAMD12 siRNA (m): sc-153204, SAMD12 shRNA Plasmid (h): sc-77738-SH, SAMD12 shRNA Plasmid (m): sc-153204-SH, SAMD12 shRNA (h) Lentiviral Particles: sc-77738-V and SAMD12 shRNA (m) Lentiviral Particles: sc-153204-V.

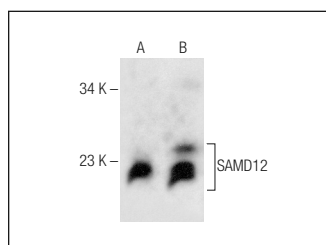
Molecular Weight of SAMD12: 23 kDa.

Positive Controls: A-431 nuclear extract: sc-2122 or PC-3 nuclear extract: sc-2152.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



SAMD12 (A-6): sc-377123. Western blot analysis of SAMD12 expression in A-431 (A) and PC-3 (B) nuclear extracts.

## SELECT PRODUCT CITATIONS

- Hwang, H., et al. 2020. Ccny knockout mice display an enhanced susceptibility to kainic acid-induced epilepsy. *Pharmacol. Res.* 160: 105100.

## STORAGE

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