SANTA CRUZ BIOTECHNOLOGY, INC.

STAMBP (C-1): sc-398480

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The Power to Question

BACKGROUND

STAMBP (STAM binding protein), also known as AMSH, is a 424 amino acid protein belonging to the peptidase M67C family. Ubiquitously expressed, STAMBP functions as a zinc metalloprotease that specifically cleaves "Lys-63"-linked polyubiquitin chains. STAMBP is able to oppose the ubiquitin-dependent sorting of receptors to lysosomes. STAMBP may play a role in signal transduction for cell growth and Myc induction mediated by IL-2 and GM-CSF. It is suggested that STAMBP potentiates BMP (bone morphogenetic protein) signaling by antagonizing the inhibitory action of Smad6 and Smad7. STAMBP consists of the JAMM motif, which is essential for the protease activity, and is inhibited by N-ethylmaleimide.

REFERENCES

1. Itoh, F., et al. 2001. Promoting bone morphogenetic protein signaling through negative regulation of inhibitory Smads. EMBO J. 20: 4132-4142.
2. McCullough, J., et al. 2004. AMSH is an endosome-associated ubiquitin isopeptidase. J. Cell Biol. 166: 487-492.
3. Li, H., et al. 2004. An RNF11: Smurf2 complex mediates ubiquitination of the AMSH protein. Oncogene 23: 1801-1808.
4. Herrera-Vigenor, F., et al. 2006. AMSH regulates calcium-sensing receptor signaling through direct interactions. Biochem. Biophys. Res. Commun. 347: 924-930.
5. McCullough, J., et al. 2006. Activation of the endosome-associated ubiquitin isopeptidase AMSH by STAM, a component of the multivesicular body-sorting machinery. Curr. Biol. 16: 160-165.
6. Nakamura, M., et al. 2006. Clathrin anchors deubiquitinating enzymes, AMSH and AMSH-like protein, on early endosomes. Genes Cells 11: 593-606.

CHROMOSOMAL LOCATION

Genetic locus: STAMBP (human) mapping to 2p13.1; Stambp (mouse) mapping to 6 C3.

SOURCE

STAMBP (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 23-40 near the N-terminus of STAMBP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398480 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

STAMBP (C-1) is recommended for detection of STAMBP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for STAMBP siRNA (h): sc-94512, STAMBP siRNA (m): sc-153875, STAMBP shRNA Plasmid (h): sc-94512-SH, STAMBP shRNA Plasmid (m): sc-153875-SH, STAMBP shRNA (h) Lentiviral Particles: sc-94512-V and STAMBP shRNA (m) Lentiviral Particles: sc-153875-V.

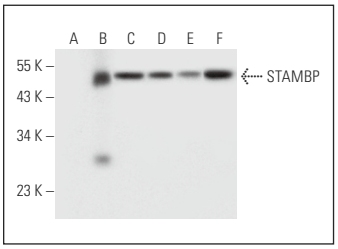
Molecular Weight of STAMBP: 50 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or STAMBP (h): 293T Lysate: sc-117052.

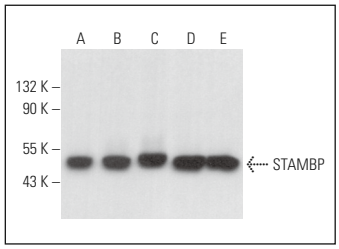
RECOMMENDED SUPPORT REAGENTS

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

DATA



STAMBP (C-1): sc-398480. Western blot analysis of STAMBP expression in non-transfected 293T: sc-117752 (**A**), human STAMBP transfected 293T: sc-117052 (**B**), K-562 (**C**), HEL 92.1.7 (**D**), A549 (**E**) and Jurkat (**F**) whole cell lysates.



STAMBP (C-1): sc-398480. Western blot analysis of STAMBP expression in MCF7 (**A**), SW480 (**B**), PC-3 (**C**), K-562 (**D**) and HEL 92.1.7 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tian, S., et al. 2021. High-throughput screening of functional deubiquitinating enzymes in autophagy. Autophagy 17: 1367-1378.

RESEARCH USE

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