

STAMBP (h): 293T Lysate: sc-117052

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-Vigener, 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.
7. Agromayor, M., et al. 2006. Interaction of AMSH with ESCRT-III and deubiquitination of endosomal cargo. *J. Biol. Chem.* 281: 23083-23091.
8. Ma, Y.M., et al. 2007. Targeting of AMSH to endosomes is required for epidermal growth factor receptor degradation. *J. Biol. Chem.* 282: 9805-9812.
9. Sato, Y., et al. 2008. Structural basis for specific cleavage of Lys-63-linked polyubiquitin chains. *Nature* 455: 358-362.

CHROMOSOMAL LOCATION

Genetic locus: STAMBP (human) mapping to 2p13.1.

PRODUCT

STAMBP (h): 293T Lysate represents a lysate of human STAMBP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

STAMBP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive STAMBP antibodies. Recommended use: 10-20 µl per lane.

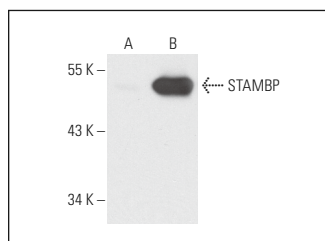
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STAMBP (H-3): sc-166565 is recommended as a positive control antibody for Western Blot analysis of enhanced human STAMBP expression in STAMBP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

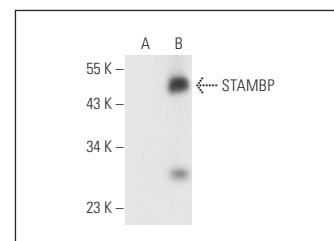
RECOMMENDED SUPPORT REAGENTS

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.

DATA



STAMBP (H-3): sc-166565. Western blot analysis of STAMBP expression in non-transfected: sc-117752 (A) and human STAMBP transfected: sc-117052 (B) 293T whole cell lysates.



STAMBP (C-1): sc-398480. Western blot analysis of STAMBP expression in non-transfected: sc-117752 (A) and human STAMBP transfected: sc-117052 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.