

STAMPB (H-4): sc-271641

BACKGROUND

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

CHROMOSOMAL LOCATION

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

SOURCE

STAMPB (H-4) is a mouse monoclonal antibody raised against amino acids 131-270 mapping within an internal region of STAMPB of mouse 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.

STAMPB (H-4) is available conjugated to agarose (sc-271641 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271641 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271641 PE), fluorescein (sc-271641 FITC), Alexa Fluor® 488 (sc-271641 AF488), Alexa Fluor® 546 (sc-271641 AF546), Alexa Fluor® 594 (sc-271641 AF594) or Alexa Fluor® 647 (sc-271641 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271641 AF680) or Alexa Fluor® 790 (sc-271641 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

STAMPB (H-4) is recommended for detection of STAMPB 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), immunohistochemistry (including paraffin-embedded sections) (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 STAMPB siRNA (h): sc-94512, STAMPB siRNA (m): sc-153875, STAMPB shRNA Plasmid (h): sc-94512-SH, STAMPB shRNA Plasmid (m): sc-153875-SH, STAMPB shRNA (h) Lentiviral Particles: sc-94512-V and STAMPB shRNA (m) Lentiviral Particles: sc-153875-V.

Molecular Weight of STAMPB: 50 kDa.

Positive Controls: STAMPB (h2): 293T Lysate: sc-159791, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

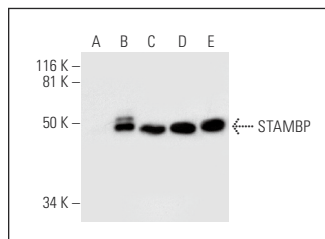
RESEARCH USE

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

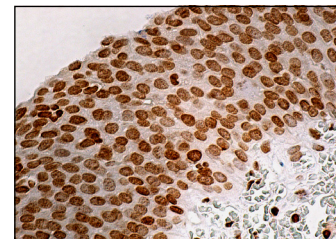
STORAGE

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

DATA



STAMPB (H-4): sc-271641. Western blot analysis of STAMPB expression in non-transfected 293T: sc-117752 (A), human STAMPB transfected 293T: sc-159791 (B), K-562 (C), HEL 92.1.7 (D) and HeLa (E) whole cell lysates.



STAMPB (H-4): sc-271641. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear and cytoplasmic staining of urothelial cells.

SELECT PRODUCT CITATIONS

- McDonnell, L.M., et al. 2013. Mutations in STAMPB, encoding a deubiquitinating enzyme, cause microcephaly-capillary malformation syndrome. *Nat. Genet.* 45: 556-562.
- Kapuralin, K., et al. 2015. STAM2, a member of the endosome-associated complex ESCRT-0 is highly expressed in neurons. *Mol. Cell. Neurosci.* 67: 104-115.
- Bednash, J.S., et al. 2017. Targeting the deubiquitinase STAMPB inhibits NALP7 inflammasome activity. *Nat. Commun.* 8: 15203.
- Tupone, M.G., et al. 2020. MicroRNA-378a-5p is a novel positive regulator of melanoma progression. *Oncogenesis* 9: 22.
- Xu, H., et al. 2021. STAMPB promotes lung adenocarcinoma metastasis by regulating the EGFR/MAPK signaling pathway. *Neoplasia* 23: 607-623.
- Wang, D., et al. 2022. E3 ligase RNF167 and deubiquitinase STAMBPL1 modulate mTOR and cancer progression. *Mol. Cell* 82: 770-784.e9.
- Hu, M., et al. 2022. Novel compound heterozygous mutation in STAMPB causes a neurodevelopmental disorder by disrupting cortical proliferation. *Front. Neurosci.* 16: 963813.
- Yang, Q., et al. 2022. The deubiquitinating enzyme STAMPB is a newly discovered driver of triple-negative breast cancer progression that maintains RAI14 protein stability. *Exp. Mol. Med.* 54: 2047-2059.
- Hu, M., et al. 2024. AAV-mediated Stambp gene replacement therapy rescues neurological defects in a mouse model of microcephaly-capillary malformation syndrome. *Mol Ther.* E-published.

PROTOCOLS

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

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