

SSH3 (B-7): sc-390058

BACKGROUND

SSH3 (slingshot homolog 3), also known as SSH3L, is a 659 amino acid protein that localizes to both the nucleus and cytoplasm and is a human homolog of the *Drosophila* slingshot (*ssh*) protein. Functioning as a protein phosphatase, SSH3 is thought to regulate Actin filament dynamics through its control of proteins such as ADF (Actin-depolymerizing factor) and Cofilin. The ADF/Cofilin family consists of stimulus-responsive mediators that rapidly depolymerize and disassemble F-Actin in a stoichiometric manner and can be deactivated by a variety of kinases. SSH3 acts to catalytically dephosphorylate the ADF/Cofilin proteins, thereby reactivating them and allowing them to resume their control over Actin dynamics. SSH3 contains one tyrosine-protein phosphatase domain and is expressed as five isoforms due to alternative splicing events.

REFERENCES

- Bamburg, J.R. 1999. Proteins of the ADF/Cofilin family: essential regulators of Actin dynamics. *Annu. Rev. Cell Dev. Biol.* 15: 185-230.
- Gsponer, J. and Caflisch, A. 2001. Role of native topology investigated by multiple unfolding simulations of four SH3 domains. *J. Mol. Biol.* 309: 285-298.
- Niwa, R., et al. 2002. Control of Actin reorganization by Slingshot, a family of phosphatases that dephosphorylate ADF/Cofilin. *Cell* 108: 233-246.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606780. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Ohta, Y., et al. 2003. Differential activities, subcellular distribution and tissue expression patterns of three members of Slingshot family phosphatases that dephosphorylate Cofilin. *Genes Cells* 8: 811-824.

CHROMOSOMAL LOCATION

Genetic locus: SSH3 (human) mapping to 11q13.2; Ssh3 (mouse) mapping to 19 A.

SOURCE

SSH3 (B-7) is a mouse monoclonal antibody raised against amino acids 431-649 mapping at the C-terminus of SSH3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SSH3 (B-7) is available conjugated to agarose (sc-390058 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390058 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390058 PE), fluorescein (sc-390058 FITC), Alexa Fluor® 488 (sc-390058 AF488), Alexa Fluor® 546 (sc-390058 AF546), Alexa Fluor® 594 (sc-390058 AF594) or Alexa Fluor® 647 (sc-390058 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390058 AF680) or Alexa Fluor® 790 (sc-390058 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SSH3 (B-7) is recommended for detection of SSH3 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 SSH3 siRNA (h): sc-96338, SSH3 siRNA (m): sc-153844, SSH3 shRNA Plasmid (h): sc-96338-SH, SSH3 shRNA Plasmid (m): sc-153844-SH, SSH3 shRNA (h) Lentiviral Particles: sc-96338-V and SSH3 shRNA (m) Lentiviral Particles: sc-153844-V.

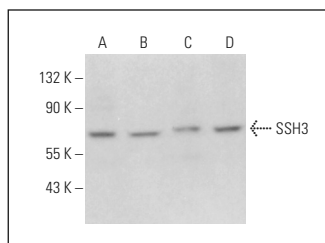
Molecular Weight of SSH3: 73 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187, NIH/3T3 whole cell lysate: sc-2210 or F9 cell lysate: sc-2245.

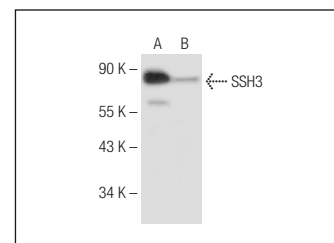
RECOMMENDED SUPPORT REAGENTS

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



SSH3 (B-7): sc-390058. Western blot analysis of SSH3 expression in NIH/3T3 (A), HeLa (B), ZR-75-1 (C) and RT-4 (D) whole cell lysates.



SSH3 (B-7): sc-390058. Western blot analysis of SSH3 expression in EOC 20 (A) and F9 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Lauterborn, J.C., et al. 2016. Cofilin activation is temporally associated with the cessation of growth in the developing hippocampus. *Cereb. Cortex* 27: 2640-2651.

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.