

SSH1 (1A5C8): sc-517226

BACKGROUND

SSH1 (slingshot homolog 1), also known as KIAA1298 or SSH1L, is a 1,049 amino acid protein that localizes to both the cytoplasm and the cytoskeleton and exists as a human homolog of the *Drosophila* slingshot (ssh) protein. Containing one tyrosine-protein phosphatase domain, SSH1 functions as a protein phosphatase that regulates Actin filament dynamics via the dephosphorylation of target proteins, such as Cofilin, which mediate Actin filament assembly and disassembly. SSH1 is expressed as multiple alternatively spliced isoforms and is subject to post-translational phosphorylation on specific amino acid residues, such as Ser 978. The gene encoding SSH1 maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

1. Niwa, R., et al. 2002. Control of actin reorganization by Slingshot, a family of phosphatases that dephosphorylate ADF/cofilin. *Cell* 108: 233-246.
2. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606778. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Endo, M., et al. 2003. Control of growth cone motility and morphology by LIM kinase and Slingshot via phosphorylation and dephosphorylation of cofilin. *J. Neurosci.* 23: 2527-2537.
4. Nagata-Ohashi, K., et al. 2004. A pathway of neuregulin-induced activation of cofilin-phosphatase Slingshot and cofilin in lamellipodia. *J. Cell Biol.* 165: 465-471.
5. Soosairajah, J., et al. 2005. Interplay between components of a novel LIM kinase-slingshot phosphatase complex regulates cofilin. *EMBO J.* 24: 473-486.
6. Nishita, M., et al. 2005. Spatial and temporal regulation of cofilin activity by LIM kinase and Slingshot is critical for directional cell migration. *J. Cell Biol.* 171: 349-359.
7. Kligys, K., et al. 2007. The slingshot family of phosphatases mediates Rac1 regulation of cofilin phosphorylation, laminin-332 organization, and motility behavior of keratinocytes. *J. Biol. Chem.* 282: 32520-32528.
8. Kurita, S., et al. 2008. Molecular dissection of the mechanisms of substrate recognition and F-actin-mediated activation of cofilin-phosphatase Slingshot-1. *J. Biol. Chem.* 283: 32542-32552.
9. Kligys, K., et al. 2009. 14-3-3 ζ/τ heterodimers regulate Slingshot activity in migrating keratinocytes. *Biochem. Biophys. Res. Commun.* 383: 450-454.

STORAGE

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

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: SSH1 (human) mapping to 12q24.11.

SOURCE

SSH1 (1A5C8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1032-1044 of SSH1 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SSH1 (1A5C8) is recommended for detection of SSH1 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for SSH1 siRNA (h): sc-96081, SSH1 shRNA Plasmid (h): sc-96081-SH and SSH1 shRNA (h) Lentiviral Particles: sc-96081-V.

Molecular Weight of SSH1: 116 kDa.

RESEARCH USE

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