

Slingshot-1L (C-terminal Region)

Cat. # SP1711

Host Rabbit Polyclonal

Size 100 µl

Background:

Members of the ADF/cofilin (AC) family are actin-severing proteins that regulate actin remodeling during cell motility. Regulation of cofilin activity can occur through serine phosphorylation and dephosphorylation. Activation of cofilin kinases, LIMK1 or LIMK2, leads to phosphorylation of cofilin at serine 3. This phosphorylation disrupts cofilin binding to actin *in vitro* and *in vivo*. Multiple phosphatases, Slingshot, PP1, PP2A, PP2B, and chronophin can dephosphorylate Ser-3 and activate actin binding. In mammals, the Slingshot family includes SSH1L, SSH2L, and SSH3L. SSH1L and SSH2L mRNAs are widely expressed, while SSH3L has high expression in epithelial tissues. SSH1L can associate with F-actin and may be the major phosphatase regulating cofilin activity. Disruption of SSH1L expression using RNA interference impairs directional cell migration. Thus, Slingshot phosphatases may be critical for regulating cytoskeletal protein activity and cell motility.

References

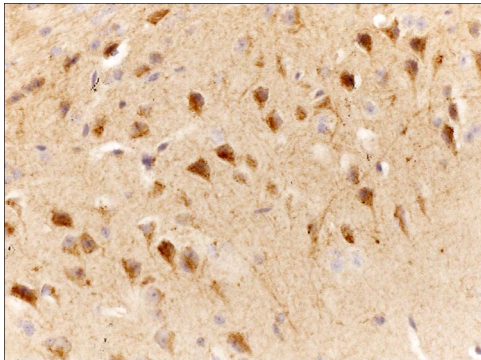
Niwa, R. et al. (2002) Cell 108:233.

Endo, M. et al. (2003) J Neurosci. 23(7):2527.

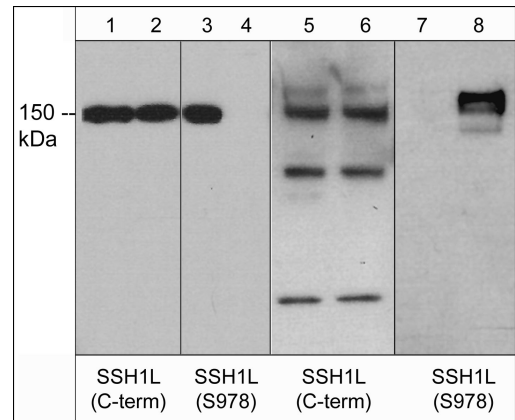
Soosairajah, J. et al. (2005) EMBO J. 24(3):473.

Kim, J.S. et al. (2009) Mol Biol Cell. 20(11):2650. (WB: human HeLa, siRNA)

Eiseler, T. et al. (2009) Nat Cell Biol. 11(5):545. (WB, IP, ICC: human HeLa cells)



Formalin fixed, citric acid treated paraffin sections of mouse cerebral cortex. Sections were probed with anti-Slingshot-1L (SP1711) then anti-Rabbit:HRP before detection using DAB. (Image provided by Carl Hobbs and Dr. Pat Doherty at Wolfson Centre for Age-Related Diseases, King's College London).



Western blot of human recombinant SSH1L untreated (lanes 1 & 3) or treated with lambda phosphatase (lanes 2 & 4) and rat PC12 cells unstimulated (lanes 5 & 7) or stimulated with calyculin A (lanes 6 & 8). The blots were probed with anti-SSH1L (C-term.) (lanes 1, 2, 5, & 6) or anti-SSH1L (Ser-978) (lanes 3, 4, 7, & 8).

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Cat. # SP1711
Host Rabbit Polyclonal
Size 100 µl

Immunogen:

A synthetic peptide (coupled to KLH) corresponding to amino acid residues in the C-terminal region of human SSH1L. This sequence has 100% homology with similar regions of mouse and bovine SSH1L, and has low homology to SSH2L and SSH3L.

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

Applications:

WB 1:1000
ELISA 1:2000
IHC 1:100

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Specificity:

This antibody was affinity purified using SSH1L peptide (without carrier). The antibody detects a 150 kDa* protein corresponding to the molecular mass of SSH1L on SDS-PAGE immunoblots of PC12 cells.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Related Products:

CK6040 Cofilin Phospho-Regulation Antibody Sampler Kit
SK6410 Slingshot-1L Phospho-Regulation Antibody Sampler Kit
SX1715 Slingshot-1L (C-terminal region) Peptide
SP3901 Slingshot-1L (Ser-978), phospho-specific Rabbit Polyclonal
LK6380 LIMK Phospho-Regulation Antibody Sampler Kit
LP2431 LIMK1 (Ser-323), phospho-specific [Conserved site] Rabbit

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