

# Slingshot-1L (Ser-978), phospho-specific

Cat. # SP3901

Host Rabbit Polyclonal

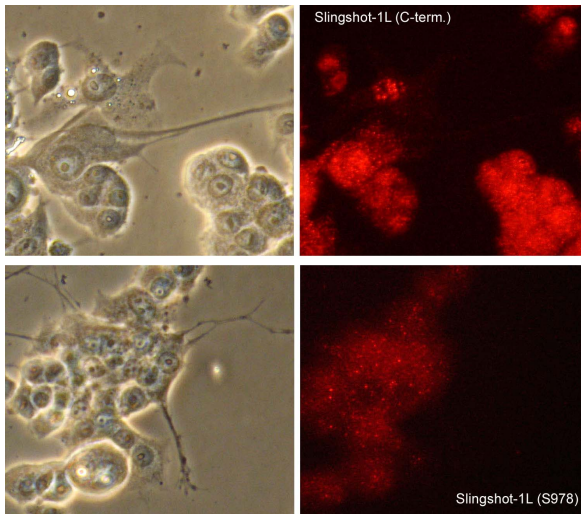
Size 100 µl

## Background:

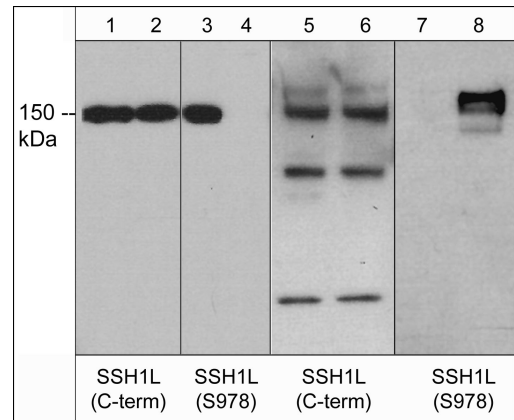
Members of the ADF/cofilin (AC) family are actin-severing proteins that regulate actin remodeling during cell motility. Regulation of cofilin activity can occur through serine phosphorylation and dephosphorylation. Activation of cofilin kinases, LIMK1 or LIMK2, leads to phosphorylation of cofilin at 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. Phosphorylation of SSH1L at Ser-937 and Ser-978 by PKD leads to association with 14-3-3, sequestration of the phosphatase to the cytoplasm, and reduces 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.  
 Nagata-Ohashi, K. et al. (2004) J Cell Biol. 165(4):465.  
 Peterburs, P. et al. (2009) Cancer Res. 69(14):5634.



Immunocytochemical labeling of Slingshot-1L in rat PC12 cells differentiated with NGF. The cells were labeled with rabbit polyclonal anti-SSH1L (C-term.) and anti-SSH1L (Ser-978) antibodies, then detected using appropriate secondary antibody conjugated to Cy3 (Right panel). Phase image of corresponding PC12 cells (Left panel).



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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# Slingshot-1L (Ser-978), phospho-specific

**Cat. #** SP3901  
**Host** Rabbit Polyclonal  
**Size** 100 µl

## **Immunogen:**

Slingshot-1L (Ser-978) antibody was generated from a phospho-peptide that included amino acids surrounding serine 978 in human SSH1L. This sequence has high homology to the conserved site in rat, mouse, chicken, and zebrafish SSH1L. The sequence also has high homology to the conserved site in SSH2L (Ser-1259).

## **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  
ICC 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 phospho-SSH1L (Ser-978) peptide (without carrier). The antibody detects a 150 kDa\* full length recombinant human SSH1L phosphoprotein and this reactivity is eliminated with lambda phosphatase treatment. The antibody also detects SSH1L on immunoblots of rat PC12 and mouse C2C12 cells that were stimulated with calyculin A.

\*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:**

SP1711 Slingshot-1L (C-terminal Region) Rabbit Polyclonal  
SX3905 phospho-Slingshot-1L (Ser-978) Peptide  
SK6410 Slingshot-1L Phospho-Regulation Antibody Sampler Kit  
CK6040 Cofilin Phospho-Regulation Antibody Sampler Kit  
LK6380 LIMK Phospho-Regulation Antibody Sampler Kit  
LP2431 LIMK1 (Ser-323), phospho-specific [Conserved site] Rabbit

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