

# POSH (E-1): sc-390103

## BACKGROUND

Rho, Rac and Cdc42 are members of the small GTPase family. These proteins act as molecular switches, cycling between an active GTP-bound state and an inactive GDP-bound state. Activation of these proteins results in rearrangements of filamentous actin and the formation of Actin stress fibers. Many of the targets of these GTPases are involved in signal transduction events mediated by Src3 homology (SH3) domains. POSH, for "plenty of SH3s", is a Rac binding protein with four SH3 domains. POSH preferentially interacts with the GTP form of RAC and not with the GDP-bound RAC. Ectopic expression of POSH elicits JNK activation and nuclear translocation of NFκB, suggesting that POSH is involved in Rac regulation of these kinase pathways. Overexpression of POSH has also been shown to induce apoptosis.

## REFERENCES

1. Ridley, A.J. and Hall, A. 1992. The small GTP-binding protein Rho regulates the assembly of focal adhesions and Actin stress fibers in response to growth factors. *Cell* 70: 389-399.
2. Van Aelst, L. and D'Souza-Schorey, C. 1997. Rho GTPases and signaling networks. *Genes Dev.* 11: 2295-2322.
3. Sasaki, T. and Takai, Y. 1998. The Rho small G protein family-Rho GDI system as a temporal and spatial determinant for cytoskeletal control. *Biochem. Biophys. Res. Commun.* 245: 641-645.
4. Knaus, U.G. and Bokoch, G.M. 1998. The p21<sup>Rac/Cdc42</sup>-activated kinases (PAKs). *Int. J. Biochem. Cell Biol.* 30: 857-862.

## CHROMOSOMAL LOCATION

Genetic locus: SH3RF1 (human) mapping to 4q32.3, SH3RF3 (human) mapping to 2q12.3; Sh3rf1 (mouse) mapping to 8 B3.1, Sh3rf3 (mouse) mapping to 10 B4.

## SOURCE

POSH (E-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 845-883 near the C-terminus of POSH of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

POSH (E-1) is available conjugated to agarose (sc-390103 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390103 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390103 PE), fluorescein (sc-390103 FITC), Alexa Fluor® 488 (sc-390103 AF488), Alexa Fluor® 546 (sc-390103 AF546), Alexa Fluor® 594 (sc-390103 AF594) or Alexa Fluor® 647 (sc-390103 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390103 AF680) or Alexa Fluor® 790 (sc-390103 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390103 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

POSH (E-1) is recommended for detection of POSH and POSH2 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).

POSH (E-1) is also recommended for detection of POSH and POSH2 in additional species, including equine, canine, bovine and avian.

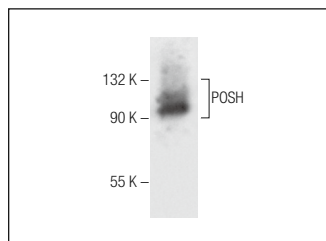
Molecular Weight of POSH: 110 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214.

## 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



POSH (E-1): sc-390103. Western blot analysis of POSH expression in KNRK whole cell lysate.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.