

POSH (M-19): sc-8280

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

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- Van Aelst, L. and D'Souza-Schorey, C. 1997. Rho GTPases and signaling networks. *Genes Dev.* 11: 2295-2322.
- Knaus, U.G. and Bokoch, G.M. 1998. The p21Rac/Cdc42-activated kinases (PAKs). *Int. J. Biochem. Cell Biol.* 30: 857-862.
- Sudol, M. 1998. From Src homology domains to other signaling modules: proposal of the 'protein recognition code'. *Oncogene* 17: 1469-1474.
- Tapon, N., et al. 1998. A new Rac target POSH is an SH3-containing scaffold protein involved in the JNK and NFκB signalling pathways. *EMBO J.* 17: 1395-1404.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: Sh3md2 (mouse) mapping to 8 B3.1.

SOURCE

POSH (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of POSH of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8280 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

POSH (M-19) is recommended for detection of POSH and POSH2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

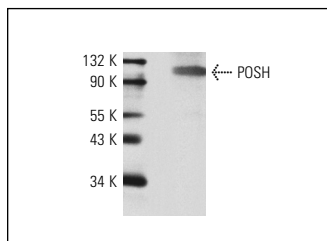
POSH (M-19) is also recommended for detection of POSH and POSH2 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for POSH siRNA (h): sc-36293, POSH siRNA (m): sc-36294, POSH shRNA Plasmid (h): sc-36293-SH, POSH shRNA Plasmid (m): sc-36294-SH, POSH shRNA (h) Lentiviral Particles: sc-36293-V and POSH shRNA (m) Lentiviral Particles: sc-36294-V.

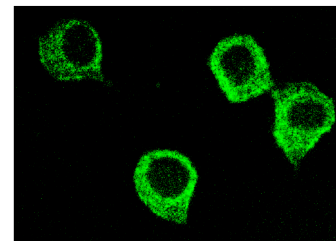
Molecular Weight of POSH: 111 kDa.

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

DATA



POSH (M-19): sc-8280. Western blot analysis of POSH expression in KNRK whole cell lysate.



POSH (M-19): sc-8280. Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Lin, S.E., et al. 2002. Identification of new human mastermind proteins defines a family that consists of positive regulators for notch signaling. *J. Biol. Chem.* 277: 50612-20620.
- Zhang, Q.G., et al. 2005. Knock-down of POSH expression is neuroprotective through downregulating activation of the MLK3-MKK4-JNK pathway following cerebral ischaemia in the rat hippocampal CA1 subfield. *J. Neurochem.* 95: 784-795.
- Zhang, Q.G., et al. 2006. Ischemic preconditioning negatively regulates plenty of SH3s-mixed lineage kinase 3-Rac1 complex and c-Jun N-terminal kinase 3 signaling via activation of Akt. *Neuroscience* 143: 431-444.

MONOS
Satisfaction
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Try **POSH (E-1): sc-390103** or **POSH (A-4): sc-376059**, our highly recommended monoclonal alternatives to POSH (M-19).