

# βPIX (C-19): sc-10932

## BACKGROUND

The serine/threonine kinase, p21 activated kinase (PAK), is a downstream effector of the small GTPases Cdc42 and Rac. PAK associates with Nck, the p85 and p110 subunits of PI3-kinase and PIX (PAK-interacting exchange factor) in a focal complex. The binding of PIX is necessary for the localization and activation of PAK in the Cdc42 to Rac signaling pathway, and this binding occurs through the high affinity of the N-terminal SH3 domain of PIX for a conserved proline rich PAK sequence. PIX exists as two isoforms,  $\alpha$  and  $\beta$ , and both are highly expressed in heart, muscle and thymus tissues of human and rat.  $\alpha$ PIX is phosphorylated via PDGF and EphB2 receptor signaling pathways or through association with PI3-kinase. The  $\alpha$ PIX isoform predominantly acts as a guanine nucleotide exchange factor (GEF) on Rac, which may mediate lamellipodia formation.

## CHROMOSOMAL LOCATION

Genetic locus: ARHGEF7 (human) mapping to 13q34; Arhgef7 (mouse) mapping to 8 A1.1.

## SOURCE

βPIX (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of βPIX of human 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-10932 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.

## APPLICATIONS

βPIX (C-19) is recommended for detection of βPIX 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). βPIX (C-19) is also recommended for detection of βPIX in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for βPIX siRNA (h): sc-39148, βPIX siRNA (m): sc-39149, βPIX shRNA Plasmid (h): sc-39148-SH, βPIX shRNA Plasmid (m): sc-39149-SH, βPIX shRNA (h) Lentiviral Particles: sc-39148-V and βPIX shRNA (m) Lentiviral Particles: sc-39149-V.

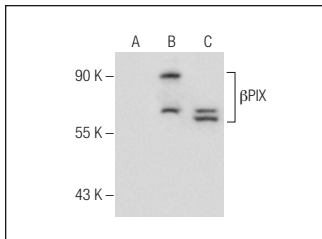
Molecular Weight of βPIX: 85 kDa.

Positive Controls: βPIX (h): 293T Lysate: sc-177731, PC-12 cell lysate: sc-2250 or Jurkat whole cell lysate: sc-2204.

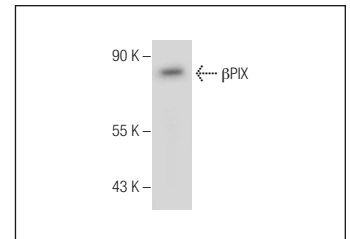
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



βPIX (C-19): sc-10932. Western blot analysis of βPIX expression in non-transfected 293T: sc-117752 (A), human βPIX transfected 293T: sc-177731 (B) and PC-12 (C) whole cell lysates.



βPIX (C-19): sc-10932. Western blot analysis of βPIX expression in Jurkat whole cell lysate.

## SELECT PRODUCT CITATIONS

- Kissil, J.L., et al. 2003. Merlin, the product of the NF2 tumor suppressor gene, is an inhibitor of the p21-activated kinase, PAK1. *Mol. Cell* 12: 841-849.
- Kodani, A., et al. 2010. Par6  $\alpha$  interacts with the dynactin subunit p150 glued and is a critical regulator of centrosomal protein recruitment. *Mol. Cell* 21: 3376-3385.
- Mendoza-Catalán, M.A., et al. 2012. Nuclear expression of Rac1 in cervical premalignant lesions and cervical cancer cells. *BMC Cancer* 12: 116.
- Myklebust, L.M., et al. 2015. Biochemical and cellular analysis of Ogdan syndrome reveals downstream Nt-acetylation defects. *Hum. Mol. Genet.* 24: 1956-1976.

## RESEARCH USE

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


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Try **βPIX (H-3): sc-393184** or **βPIX (23): sc-136035**, our highly recommended monoclonal alternatives to βPIX (C-19).