SANTA CRUZ BIOTECHNOLOGY, INC.

αPIX (Q-20): sc-10927

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, α and β and both are highly expressed in heart, muscle, and thymus tissues of human and rat. αPIX is phosphorylated via PDGF and EphB2 receptor signaling pathways or through association with PI3-kinase. The αPIX isoform predominantly acts as a guanine nucleotide exchange factor (GEF) on Rac, which may mediate lamellipodia formation.

CHROMOSOMAL LOCATION

Genetic locus: ARHGEF6 (human) mapping to Xq26.3; Arhgef6 (mouse) mapping to X A5.

SOURCE

αPIX (Q-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of αPIX 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-10927 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

αPIX (Q-20) is recommended for detection of αPIX 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

αPIX (Q-20) is also recommended for detection of αPIX in additional species, including equine and canine.

Suitable for use as control antibody for αPIX siRNA (h): sc-39146, αPIX siRNA (m): sc-39147, αPIX shRNA Plasmid (h): sc-39146-SH, αPIX shRNA Plasmid (m): sc-39147-SH, αPIX shRNA (h) Lentiviral Particles: sc-39146-V and αPIX shRNA (m) Lentiviral Particles: sc-39147-V.

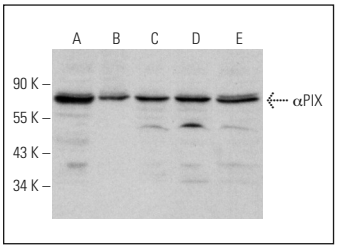
Molecular Weight of αPIX: 75 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Raji whole cell lysate: sc-364236 or Ramos cell lysate: sc-2216.

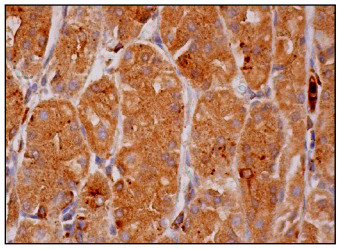
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



αPIX (Q-20): sc-10927. Western blot analysis of αPIX expression in HeLa (**A**) and A-673 (**B**) nuclear extracts and Jurkat (**C**), Raji (**D**) and Ramos (**E**) whole cell lysates.



αPIX (Q-20): sc-10927. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Baek, H.Y., et al. 2007. Interaction between the *Helicobacter pylori* CagA and αPix in gastric epithelial AGS cells. Ann. N.Y. Acad. Sci. 1096: 18-23.
2. Singh, N.K., et al. 2011. 12/15-Lipoxygenase gene knockout severely impairs ischemia-induced angiogenesis due to lack of Rac1 farnesylation. Blood 118: 5701-5712.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.