

# PYK2 (C-19): sc-1515

## BACKGROUND

Focal adhesion kinase (FAK) was initially identified as a substrate for the intrinsic protein tyrosine kinase activity of Src-encoded pp60. The deduced amino acid sequence of FAK p125 has shown it to be a cytoplasmic protein tyrosine kinase whose sequence and structural organization are unique compared to other protein families described. A putative new member of the FAK family, designated PYK2 (proline-rich tyrosine kinase 2), exhibits 61% sequence identity with FAK over its kinase domain. PYK2 (also designated CAKb or RAFTK) is highly expressed in the central nervous system. Activation of the kinase leads to modulation of ion channel function and the activation of the MAPK signaling pathway. PYK2 is rapidly phosphorylated on tyrosine residues in response to stimuli that increase intracellular calcium levels and compounds that activate members of the PKC family of kinases, such as phorbol esters.

## CHROMOSOMAL LOCATION

Genetic locus: PTK2B (human) mapping to 8p21.2; Ptk2b (mouse) mapping to 14 D1.

## SOURCE

PYK2 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PYK2 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-1515 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PYK2 (C-19) is recommended for detection of PYK2 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), im-munoprecipitation (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), im-munohistochemistry (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).

PYK2 (C-19) is also recommended for detection of PYK2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PYK2 siRNA (h): sc-36332, PYK2 siRNA (m): sc-36333, PYK2 shRNA Plasmid (h): sc-36332-SH, PYK2 shRNA Plasmid (m): sc-36333-SH, PYK2 shRNA (h) Lentiviral Particles: sc-36332-V and PYK2 shRNA (m) Lentiviral Particles: sc-36333-V.

Molecular Weight of PYK2: 120 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, Ramos cell lysate: sc-2216 or PYK2 (h): 293T Lysate: sc-115595.

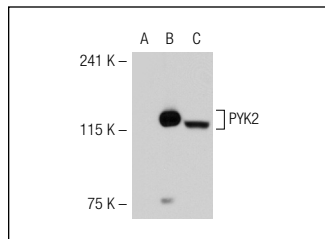
## RESEARCH USE

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

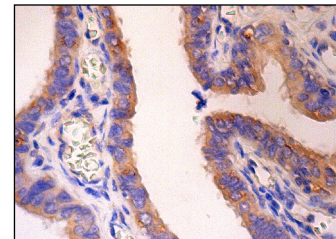
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



PYK2 (C-19): sc-1515. Western blot analysis of PYK2 expression in non-transfected 293T: sc-117752 (A), human PYK2 transfected 293T: sc-115595 (B) and Ramos (C) whole cell lysates.



PYK2 (C-19): sc-1515. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

- Jeschke, M., et al. 1998. Expression of Src family kinases and their putative substrates in the human preosteoclastic cell line FLG 29.1. *J. Bone Miner. Res.* 13: 1880-1889.
- Riol-Blanco, L., et al. 2005. The chemokine receptor CCR7 activates in dendritic cells two signaling modules that independently regulate chemotaxis and migratory speed. *J. Immunol.* 174: 4070-4080.
- Maqueda, A., et al. 2006. Activation pathways of  $\alpha 4\beta 1$  integrin leading to distinct T-cell cytoskeleton reorganization, Rac1 regulation and PYK2 phosphorylation. *J. Cell. Physiol.* 207: 746-756.
- Totani, L., et al. 2006. Src-family kinases mediate an outside-in signal necessary for  $\beta 2$  integrins to achieve full activation and sustain firm adhesion of polymorphonuclear leucocytes tethered on E-selectin. *Biochem. J.* 396: 89-98.
- Cohen-Hillel, E., et al. 2009. Cell migration to the chemokine CXCL8: paxillin is activated and regulates adhesion and cell motility. *Cell. Mol. Life Sci.* 66: 884-899.
- Stabile, H., et al. 2010. Impaired NK-cell migration in WAS/XLT patients: role of Cdc42/WASp pathway in the control of chemokine-induced  $\beta 2$  integrin high-affinity state. *Blood* 115: 2818-2826.
- St-Pierre, J., et al. 2011. Hypophosphorylated and inactive PYK2 associates with paxillin at the microtubule organizing center in hematopoietic cells. *Cell. Signal.* 23: 718-730.

**MONOS**  
Satisfaction  
Guaranteed

Try **PYK2 (E-3): sc-393181** or **PYK2 (F-6): sc-74539**, our highly recommended monoclonal alternatives to PYK2 (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **PYK2 (E-3): sc-393181**.