Pyk2 ABfinity™ Recombinant Rabbit Monoclonal Antibody - Purified

Catalog no. 700183

(See product label for lot information)

Clone/PAD: 9H12L1
Isotype: IgG
Gene ID: 2185
Protein Acc. no.: Q14289
Qty: 100 µg
Volume: 200 µl
Concentration: 0.5 mg/ml

Formulation
PBS + 0.09% azide

Immunogen
A recombinant protein corresponding to amino acids 780-880 of Q14289.

Immunogen sequence
REEDFIQPSSREEAQQLWEAEKVKMRQIL
DKQQKQMVEDYQWLRQEEKSLDPMVYM
NDKSPLTPEKEVGYLEFTGPPQKPPRLG
AQSIQPTANLDRTDDLV

Reactivity
This antibody reacts with human Pyk2. Based on sequence identity and similarity, reactivity to chimpanzee, Rhesus monkey, orangutan, canine, equine, bovine, rat, and mouse is expected.

Storage
2-8°C for up to 1 mo, -20°C for long term storage. Avoid repeated freezing and thawing.

Expiration Date
Expires one year from date of receipt when stored as instructed.

Validated Applications:

	Species	Test Material	Concentration
Immunohistochemistry	human	breast and lung carcinoma	4-6 µg/ml
Immunofluorescence	human	A549	18-22 µg/ml
Flow Cytometry	human	Jurkat	0.5-1 µg/test

Background
Proline-rich/Ca^{2+}-activated tyrosine kinase (Pyk2) 125kDa is a member of the FAK family of non-receptor, proline-rich PTK's. Pyk2 signaling is initiated by a variety of extracellular stimuli including integrin ligation, surface marker ligation (e.g., CD3, CD28, TCR, VCAM), bioactive peptides, growth factors, cytokines, chemokines, and certain stress stimuli (1,2). Pyk2 is involved in the regulation of vesicular transport, osteoclastic bone resorption, modulation of ion channels, T- and B-cell receptor signaling and cell death (1). Pyk2 is phosphorylated on multiple tyrosine residues, which can regulate pathway selection and enzyme activity. This antibody recognizes total Pyk2.

References

1. Avraham, H. et al. (2000) RAFTK/Pyk2-mediated cellular signaling. Cell Signaling, 12: 123-133.
2. Schauwienold D. et al. (2008) The transactivated epidermal growth factor receptor recruits Pyk2 to regulate Src kinase activity. J. Biol. Chem 283:27748-27756.

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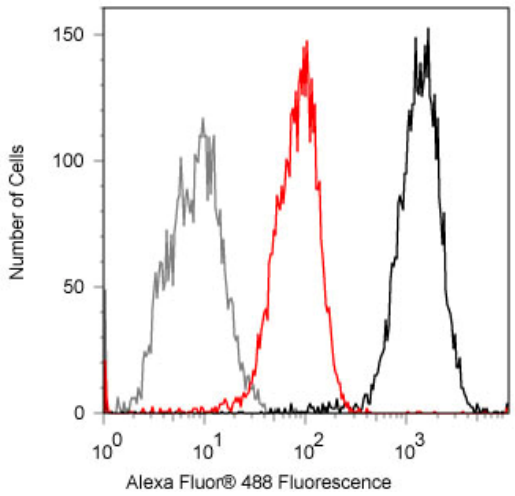
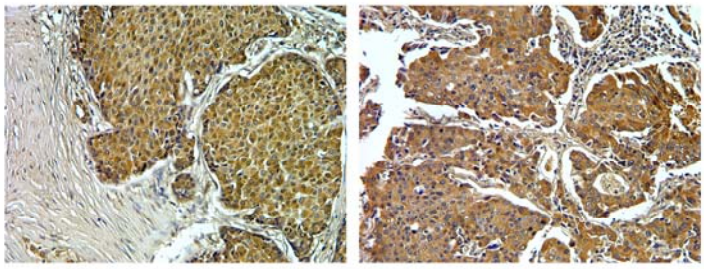
This antibody is manufactured under a licensed process covered by Patent # 5, 599, 681.



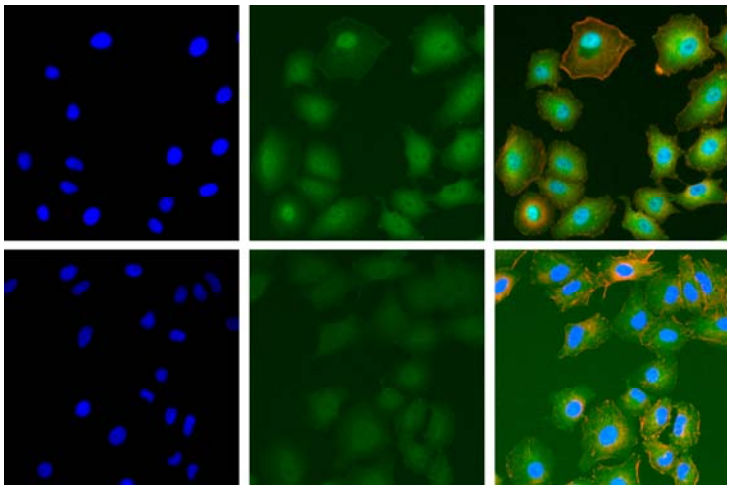
Flow cytometry of Jurkat cells labeled with rabbit anti-Pyk2 (Cat. No. 700183).

Jurkat cells were fixed and permeabilized using FIX & PERM® (Cat. No. GAS004) reagents. Cells were then stained with (black trace) or without (gray trace) 0.5 µg anti-Pyk2 followed by Alexa Fluor® 488 goat anti-rabbit Ig (Cat. No. A11008). Pre-incubation with the immunogenic peptide decreased the signal (red trace).



Immunohistochemistry of human breast and lung carcimona tissue labeled with rabbit anti-Pyk2 (Cat. No. 700183).

FFPE human breast (left) and lung (right) carcinoma tissue were labeled with rabbit anti-Pyk2 (5 µg/ml). Tissues were pretreated with EDTA and detected with SuperPicTure™ Polymer DAB (Cat. No.87-8963). Images were taken at 40x magnification. Note cytoplasmic staining in tumor cells.



Immunocytochemistry of A549 cells labeled with rabbit anti-Pyk2 (Cat. No. 700183).

A549 cells labeled with rabbit anti-Pyk2 (20 µg/ml) in the absence of immunogen (top panels), and presence of recombinant protein used as immunogen (bottom panels). Alexa Fluor® 488 goat anti-rabbit (Cat. No. A11008) at 1:1000 was used as secondary antibody. Actin was stained with Alexa Fluor® 568 Phalloidin (Cat. No. A12380). Hoechst only (left), Pyk2 (AF488) signal only (middle), and composite image with Phalloidin (right).