

Product datasheet

Anti-PYK2 (phospho Y579 + Y580) antibody ab4807

[3 Images](#)

Overview

Product name	Anti-PYK2 (phospho Y579 + Y580) antibody
Description	Rabbit polyclonal to PYK2 (phospho Y579 + Y580)
Host species	Rabbit
Specificity	Some cross-reactivity still may be experienced in cases where Focal Adhesion Kinase is overexpressed relative to PYK 2 within the same cell system.
Tested applications	Suitable for: IHC-P, ICC
Species reactivity	Reacts with: Mouse, Human
Immunogen	Synthetic peptide corresponding to Human PYK2 (phospho Y579 + Y580). The sequence is conserved in mouse and rat.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.3 Constituents: PBS, 50% Glycerol (glycerin, glycerine), 1% BSA
Purity	Immunogen affinity purified
Purification notes	Purified from rabbit serum by sequential epitope-specific chromatography. The antibody has been negatively preadsorbed using (i) a non-phosphopeptide corresponding to the site of phosphorylation to remove antibody that is reactive with non-phosphorylated PYK 2, (ii) a generic tyrosine phosphorylated peptide to remove antibody that is reactive with phosphotyrosine, irrespective of the sequence, and (iii) a phosphopeptide derived from the corresponding region of Focal Adhesion Kinase (a PYK 2-related protein) to remove antibody that is reactive with

phosphorylated Focal Adhesion Kinase protein. The final product is generated by affinity chromatography using a PYK 2-derived peptide that is phosphorylated at tyrosines 579 and 580.

Clonality Polyclonal
Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab4807 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/10 - 1/100.
ICC		1/250.

Target

Function Involved in calcium induced regulation of ion channel and activation of the map kinase signaling pathway. May represent an important signaling intermediate between neuropeptide activated receptors or neurotransmitters that increase calcium flux and the downstream signals that regulate neuronal activity. Interacts with the SH2 domain of Grb2. May phosphorylate the voltage-gated potassium channel protein Kv1.2. Its activation is highly correlated with the stimulation of c-Jun N-terminal kinase activity. Involved in osmotic stress-dependent SNCA 'Tyr-125' phosphorylation. In concert with SRC, plays an important role in osteoclastic bone resorption. Both the formation of a SRC-PTK2B complex, and SRC kinase activity are necessary for this function. The Tyr-402 phosphorylated form serves as a docking site for SRC and is important for the organization of the osteoclast actin cytoskeleton and attachment sites and for bone resorption.

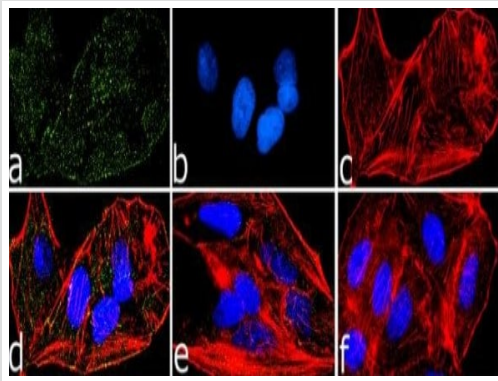
Tissue specificity Most abundant in the brain, with highest levels in amygdala and hippocampus. Low levels in kidney. Also expressed in spleen and lymphocytes.

Sequence similarities Belongs to the protein kinase superfamily. Tyr protein kinase family. FAK subfamily. Contains 1 FERM domain. Contains 1 protein kinase domain.

Post-translational modifications Phosphorylated on tyrosine residues in response to various stimuli that elevate the intracellular calcium concentration, as well as by PKC activation. Recruitment by nephrocystin to cell matrix adhesions initiates Tyr-402 phosphorylation. In monocytes, adherence to substrata is required for tyrosine phosphorylation and kinase activation. Angiotensin II, thapsigargin and L-alpha-lysophosphatidic acid (LPA) also induce autophosphorylation and increase kinase activity.

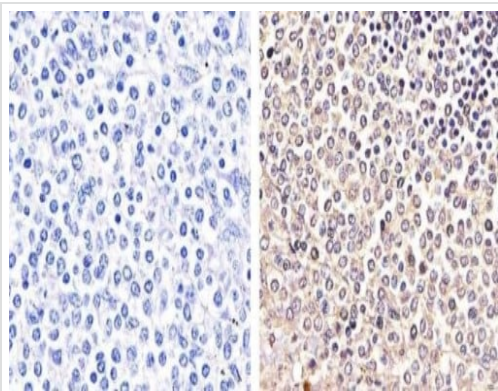
Cellular localization Cytoplasm. Cell membrane. Interaction with nephrocystin induces the membrane-association of the kinase.

Images



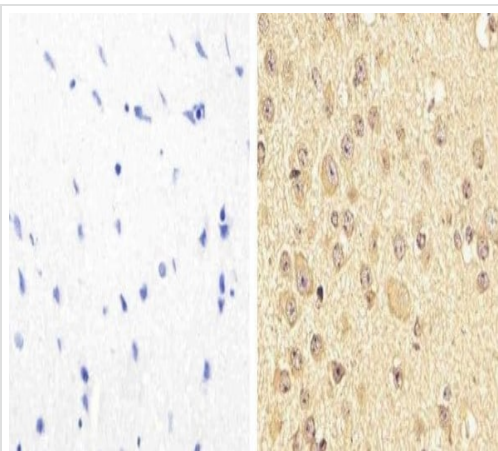
Immunocytochemistry - Anti-PYK2 (phospho Y579 + Y580) antibody (ab4807)

Immunocytochemistry analysis of A549 cells labelling PYK2 with ab4807 at 1/250 dilution. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 1% BSA for 1 hour at room temperature. A Goat anti-Rabbit IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate was used as a secondary antibody at 1:2000. Nuclei (Panel b: blue) were stained with DAPI. F-actin (Panel c: red) was stained with Alexa Fluor® 555 Rhodamine Phalloidin. Panel d is a merged image showing membranous localization. Panel e is untreated cell with no signal. Panel f is a no primary antibody control. The images were captured at 60X magnification.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PYK2 (phospho Y579 + Y580) antibody (ab4807)

Immunohistochemistry analysis of human spleen tissue labelling Phospho-Pyk2 (pYpY579/580) with ab4807 at 1/20 dilution. Antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H₂O₂-methanol for 15 min at room temperature, washed with ddH₂O and PBS. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting. A no was also produced antibody control (left).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PYK2 (phospho Y579 + Y580) antibody (ab4807)

Immunohistochemistry analysis of mouse brain tissue labelling Phospho-Pyk2 (pYpY579/580) with ab4807 at 1/20 dilution. Antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H₂O₂-methanol for 15 min at room temperature, washed with ddH₂O and PBS. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting. A no was also produced antibody control (left).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors