



Datasheet for ABIN745763

anti-PTK2B antibody (pTyr402)



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4 Images

1 Publication

Overview

Quantity:	100 µL
Target:	PTK2B
Binding Specificity:	pTyr402
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PTK2B antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunofluorescence (Cultured Cells) (IF (cc)), Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic phosphopeptide derived from human Pyk2/PTK2B around the phosphorylation site of Tyr402
Isotype:	IgG
Cross-Reactivity:	Mouse, Rat
Predicted Reactivity:	Human,Dog,Cow,Pig,Horse,Rabbit
Purification:	Purified by Protein A.

Target Details

Target:	PTK2B
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Target Details

Alternative Name: [Pyk2 \(PTK2B Products\)](#)

Background: Synonyms: Protein-tyrosine kinase 2-beta, Calcium-dependent tyrosine kinase, CADTK, Calcium-regulated non-receptor proline-rich tyrosine kinase, Cell adhesion kinase beta, CAK-beta, CAKB, Focal adhesion kinase 2, FADK 2, Proline-rich tyrosine kinase 2, Related adhesion focal tyrosine kinase, RAFTK, PTK2B, FAK2, PYK2

Background: Non-receptor protein-tyrosine kinase that regulates reorganization of the actin cytoskeleton, cell polarization, cell migration, adhesion, spreading and bone remodeling. Plays a role in the regulation of the humoral immune response, and is required for normal levels of marginal B-cells in the spleen and normal migration of splenic B-cells. Required for normal macrophage polarization and migration towards sites of inflammation. Regulates cytoskeleton rearrangement and cell spreading in T-cells, and contributes to the regulation of T-cell responses. Promotes osteoclastic bone resorption, this requires both PTK2B/PYK2 and SRC. May inhibit differentiation and activity of osteoprogenitor cells. Functions in signaling downstream of integrin and collagen receptors, immune receptors, G-protein coupled receptors (GPCR), cytokine, chemokine and growth factor receptors, and mediates responses to cellular stress. Forms multisubunit signaling complexes with SRC and SRC family members upon activation, this leads to the phosphorylation of additional tyrosine residues, creating binding sites for scaffold proteins, effectors and substrates. Regulates numerous signaling pathways. Promotes activation of phosphatidylinositol 3-kinase and of the AKT1 signaling cascade. Regulates production of the cellular messenger cGMP. Promotes activation of the MAP kinase signaling cascade, including activation of MAPK1/ERK2, MAPK3/ERK1 and MAPK8/JNK1. Promotes activation of Rho family GTPases, such as RHOA and RAC1. Recruits the ubiquitin ligase MDM2 to P53/TP53 in the nucleus, and thereby regulates P53/TP53 activity, P53/TP53 ubiquitination and proteasomal degradation. Acts as a scaffold, binding to both PDPK1 and SRC, thereby allowing SRC to phosphorylate PDPK1 at 'Tyr-9', 'Tyr-373', and 'Tyr-376'. Promotes phosphorylation of NMDA receptors by SRC family members, and thereby contributes to the regulation of NMDA receptor ion channel activity and intracellular Ca(2+) levels.

Gene ID: 2185

UniProt: [Q14289](#)

Pathways: [EGFR Signaling Pathway](#), [Regulation of Actin Filament Polymerization](#), [Carbohydrate Homeostasis](#), [Glycosaminoglycan Metabolic Process](#), [Cellular Glucan Metabolic Process](#), [Cell-Cell Junction Organization](#), [Regulation of Cell Size](#), [Regulation of Carbohydrate Metabolic Process](#), [Hepatitis C](#), [Protein targeting to Nucleus](#), [CXCR4-mediated Signaling Events](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [Signaling of Hepatocyte Growth Factor Receptor](#),

Target Details

Positive Regulation of fat Cell Differentiation, VEGF Signaling

Application Details

Application Notes: WB 1:300-5000
 ELISA 1:500-1000
 IHC-P 1:200-400
 IHC-F 1:100-500
 IF(IHC-P) 1:50-200
 IF(IHC-F) 1:50-200
 IF(ICC) 1:50-200

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 1 µg/µL

Buffer: 0.01M TBS(pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.

Preservative: ProClin

Precaution of Use: This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.

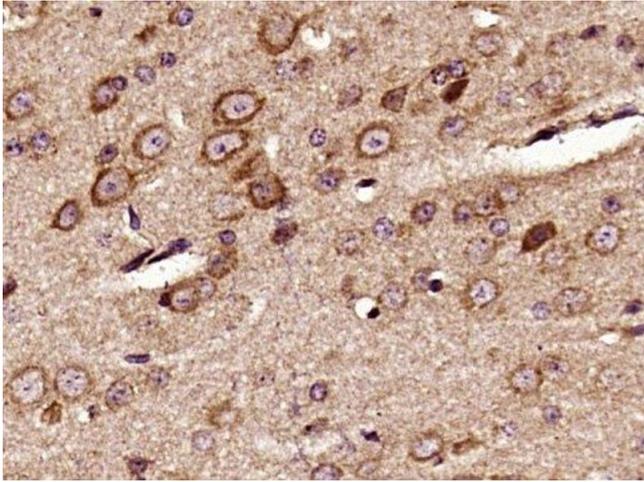
Storage: 4 °C, -20 °C

Storage Comment: Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Expiry Date: 12 months

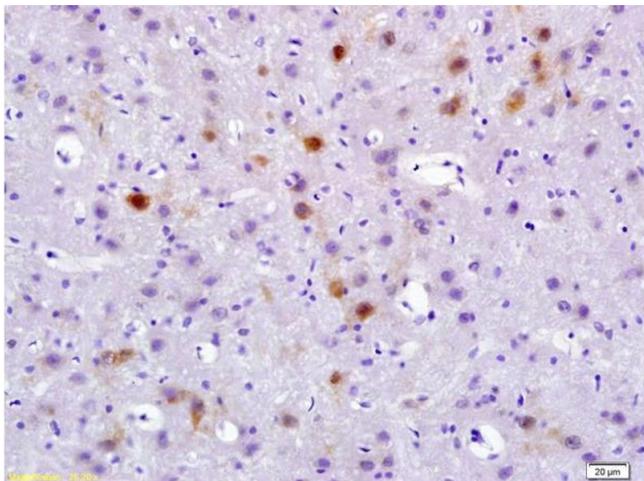
Publications

Product cited in: Cao, Zheng, Wang, Wang, Li, Li, Lai, Wang, Qin: "Src blockage by siRNA inhibits VEGF-induced vascular hyperpemeability and osteoclast activity - an in vitro mechanism study for preventing destructive repair of osteonecrosis." in: **Bone**, Vol. 74C, pp. 58-68, (2015) ([PubMed](#)).



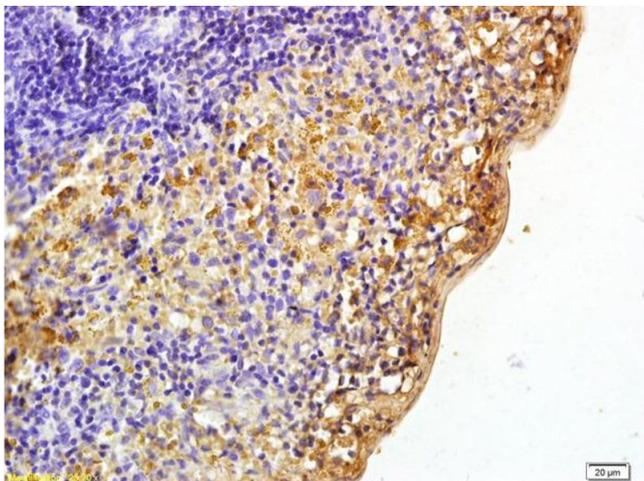
Immunohistochemistry (Paraffin-embedded Sections)

Image 1. Paraformaldehyde-fixed, paraffin embedded mouse brain, Antigen retrieval by boiling in sodium citrate buffer (pH6) for 15min, Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes, Blocking buffer (normal goat serum) at 37°C for 20min, Antibody incubation with Pyk2 (Tyr402) Polyclonal Antibody (bs-3400R) at 1:400 overnight at 4°C, followed by a conjugated secondary and DAB staining.



Immunohistochemistry

Image 2. Formalin-fixed and paraffin embedded rat brain labeled with Rabbit Anti phospho-Pyk2/PTK2B(Tyr402) Polyclonal Antibody, Unconjugated (ABIN745763) at 1:200 followed by conjugation to the secondary antibody and DAB staining



Immunohistochemistry

Image 3. Formalin-fixed and paraffin embedded rat spleen labeled with Rabbit Anti phospho-Pyk2/PTK2B(Tyr402) Polyclonal Antibody, Unconjugated (ABIN745763) at 1:200 followed by conjugation to the secondary antibody and DAB staining

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN745763.