

Rabbit PYK2 Polyclonal Antibody | anti-PYK2 antibody

Phospho-PYK2(Tyr580) Antibody

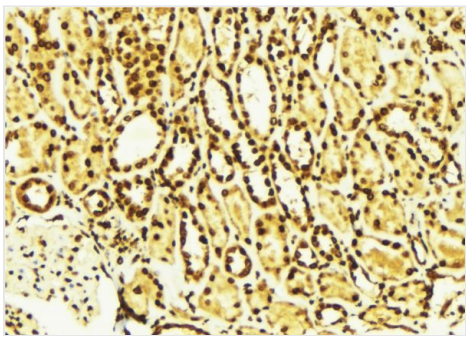
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA320727	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

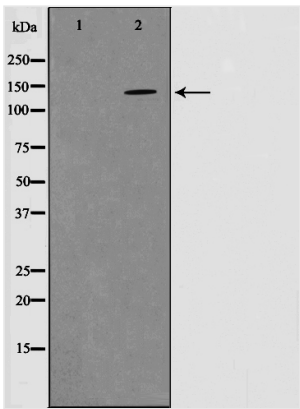
PYK2; Polyclonal Antibody; Phospho-PYK2(Tyr580) Antibody; CADTK; CAK-beta; CAKB; CAKbeta; Calcium regulated non receptor proline rich tyrosine kinase; Calcium-dependent tyrosine kinase; Cell adhesion kinase beta; E430023O05Rik; EC 2.7.10.2; FADK 2; FADK2; FAK2; FAK2_HUMAN; Focal adhesion kinase 2; MGC124628; PKB; Proline-rich tyrosine kinase 2; Protein kinase B; Protein Tyrosine Kinase 2 Beta; Protein-tyrosine kinase 2-beta; PTK; PTK2B; PTK2B protein tyrosine kinase 2 beta; RAFTK; RAFTK2; Related adhesion focal tyrosine kinase; anti-PYK2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-PYK2(Tyr580) antibody detects endogenous levels of PYK2 only when phosphorylated at Tyrosine 580
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1009
Applicable Applications for anti-PYK2 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PYK2 around the phosphorylation site of Tyrosine 580
Subcellular Location	Cytoplasm. Cell Membrane. Interaction with nephrocystin induces the membrane-association of the kinase.
Tissue Specificity	Most abundant in the brain, with highest levels in amygdala and hippocampus. Low levels in kidney (at protein level). Also expressed in spleen and lymphocytes.
Conjugation	Unconjugated
Epitope	Phospho Tyr580
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohiostchemistry)
AAA320727 at 1/100 staining Mouse kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis on mouse brain cell lysate using Phospho-PYK2(Tyr580) Antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-PYK2 antibody	Description: Pyk2 a nonreceptor tyrosine kinase of the Fak family. Predominantly expressed in the cells derived from hematopoietic lineages and in the central nervous system. Pyk2 is one of the signaling mediators for G-protein-coupled receptors. Involved in calcium induced regulation of ion channel and activation of the map kinase signaling pathway. Interacts with the SH2 domain of Grb2. Function: 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. Promotes activation of NOS3. 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 Ca2+ levels. May also regulate potassium ion transport by phosphorylation of potassium channel subunits. Phosphorylates SRC; this increases SRC kinase activity. Phosphorylates ASAP1, NPHP1, KCNA2 and SHC1. Promotes phosphorylation of ASAP2, RHOU and PXN; this requires both SRC and PTK2/PYK2. Subunit Structure: Homodimer, or homooligomer. Interacts with SIRPA and SH2D3C. Interacts with ARHGAP10. Interacts with DLG4 (By similarity). Interacts with KCNA2 (By similarity). Interacts with NPHP1, ASAP1, ASAP2, ARHGAP26, SKAP2 and TGFB1I1. The Tyr-402 phosphorylated form interacts with SRC (via SH2 domain) and SRC family members. Forms a signaling complex with EPHA1, LCK and phosphatidylinositol 3-kinase; upon activation by EFNA1. Interacts with GRB2 (via SH2 domain). Interacts with P53/TP53 and MDM2. Interacts with MYLK. Interacts with BCAR1. Interacts with PDPK1. Interacts (hypophosphorylated) with PXN. Interacts with RB1CC1. Interacts with RHOU. Interacts with VAV1. Interacts with LPXN and PTPN12. Post-translational Modifications: Phosphorylated on tyrosine residues in response to various stimuli that elevate the intracellular calcium concentration; this activation is indirect and may be mediated by production of reactive oxygen species (ROS). Tyr-402 is the major autophosphorylation site, but other kinases can also phosphorylate Tyr-402. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit. Phosphorylation at Tyr-402 promotes interaction with SRC and SRC family members, leading to phosphorylation at Tyr-579; Tyr-580 and Tyr-881. Phosphorylation at Tyr-881 is important for interaction with GRB2. Phosphorylated on tyrosine residues upon activation of FGR and PKC. Recruitment by NPHP1 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. Phosphorylation by MYLK promotes ITGB2 activation and is thus essential to trigger neutrophil transmigration during lung injury. Dephosphorylated by PTPN12. Similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family. FAK subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	27886584
NCBI GeneID	2185
NCBI Accession #	NP_004094.3
NCBI GenBank Nucleotide #	NM_004103.4
UniProt Accession #	Q14289; Q13475; Q14290; Q16709; Q6PID4; D3DST0
Molecular Weight	Observed: 135 kDa Predicted: 116 kDa
NCBI Official Full Name	protein-tyrosine kinase 2-beta isoform a

NCBI Official Synonym Full Names	protein tyrosine kinase 2 beta
NCBI Official Symbol	PTK2B
NCBI Official Synonym Symbols	PKB; PTK; CAKB; FAK2; PYK2; CADTK; FADK2; RAFTK
NCBI Protein Information	protein-tyrosine kinase 2-beta
UniProt Protein Name	Protein-tyrosine kinase 2-beta
UniProt Gene Name	PTK2B
UniProt Synonym Gene Names	FAK2; PYK2; RAFTK; CADTK; CAK-beta; CAKB; FADK 2; RAFTK

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/polyclonal/pyk2-antibody-immunohistochemistry-western-blot-elisa/320727>