PTK2B Lysate – Tissue Lysate

PRODUCT OVERVIEW

Product Name	PTK2B, Lysate
Full Product Name	Human PTK2B Protein Lysate
Product Gene Name	PTK2B lysate
Product Synonym Names	PTK2B; CADTK; CAKB; FADK2; FAK2; PKB; PTK; PYK2; RAFTK
Host	Human
Form/Format	Lyophilized
Preparation and Storage	Store at -20 degree C Once reconsituted, aliquot and store any remaining material at-20 degree C to avoid repeated freeze-thaw cycles.
Molecular Weight	116kDa
OMIM	601212
3D Structure	ModBase 3D Structure for Q14289
Related Product Information for PTK2B lysate	Human PTK2B Protein Lysate 20ug is provided as a Lyophilized powder. This is a Recombinant Protein Lysate produced in HEK293T cells. This protein lysate can be reconsituted using SDS Sample Buffer.
Other Notes	Small volumes of PTK2B lysate vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PTK2B purchase	MBS8418039 is a lysate targeting PTK2B. Also known as Human PTK2B Protein Lysate. Host: Human.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PTK2B. It may not necessarily be applicable to this product.

NCBI GI #	27886584
NCBI GeneID	2185
NCBI Accession #	NP_004094
UniProt Primary Accession #	Q14289
UniProt Related Accession #	Q14289
GenBank Nucleotide #	NM_004103
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
UniProt Protein Name	Protein-tyrosine kinase 2-beta
UniProt Synonym Protein Names	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

Protein Family	Protein-tyrosine kinase
UniProt Gene Name	PTK2B
UniProt Synonym Gene Names	FAK2; PYK2; RAFTK; CADTK; CAK-beta; CAKB; FADK 2; RAFTK
UniProt Entry Name	FAK2_HUMAN
NCBI Protein Information	protein-tyrosine kinase 2-beta
NCBI Summary for PTK2B	This gene encodes a cytoplasmic protein tyrosine kinase which is involved in calcium-induced regulation of ion channels and activation of the map kinase signaling pathway. The encoded protein may represent an important signaling intermediate between neuropeptide-activated receptors or neurotransmitters that increase calcium flux and the downstream signals that regulate neuronal activity. The encoded protein undergoes rapid tyrosine phosphorylation and activation in response to increases in the intracellular calcium concentration, nicotinic acetylcholine receptor activation, membrane depolarization, or protein kinase C activation. This protein has been shown to bind CRK-associated substrate, nephrocystin, GTPase regulator associated with FAK, and the SH2 domain of GRB2. The encoded protein is a member of the FAK subfamily of protein tyrosine kinases but lacks significant sequence similarity to kinases from other subfamilies. Four transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]
UniProt Comments for PTK2B	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. 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. It plays an important role in cell motility such as spreading and migration. Two alternatively spliced isoforms have been described. Protein type: EC 2.7.10.2; Kinase, protein; Nuclear receptor co-regulator; Protein kinase, tyrosine (non-receptor); Protein kinase, TK; TK group; Fak family Chromosomal Location of Human Ortholog: 8p21.1 Cellular Component: focal adhesion; dendrite; postsynaptic density; cell cortex; cytosol; lipid raft; N-methyl-D-aspartate selective glutamate receptor complex; nucleoplasm; extrinsic to internal side of plasma membrane; growth cone; cytoskeleton; cell soma; lamellipodium; axon; perinuclear region of cytoplasm; cytoplasm; nucleus Molecular Function: protein binding; signal transducer activity; calmodulin-dependent protein kinase activity; protein-tyrosine kinase activity; N-methyl-D-aspartate selective glutamate receptor activity; 3-phosphoinositide-dependent protein kinase binding; non-membrane spanning protein tyrosine kinase activity; protein complex binding; ATP binding; receptor binding Biological Process: focal adhesion formation; positive regulation of JNK activity; regulation of nitric oxide biosynthetic process; regulation of cGMP biosynthetic process; protein amino acid phosphorylation; glial cell proliferation; regulation of cell shape; regulation of inositol trisphosphate biosynthetic process; negative regulation of bone mineralization; elevation of cytosolic calcium ion concentration; cell surface receptor linked signal transduction; tumor necrosis factor-mediated signaling pathway; response to glucose stimulus; protein complex assembly; negative regulation of neuron apoptosis; neurite development; bone resorption; response to drug; negative regulation of myeloid cell differentiation; positive regulation of nitric-oxide synthase activity; response to osmotic stress; positive regulation of cell growth; marginal zone B cell differentiation; positive regulation of peptidyl-tyrosine phosphorylation; positive regulation of angiogenesis; response to ethanol; ionotropic glutamate receptor signaling pathway; response to mechanical stimulus; response to calcium ion; negative regulation of apoptosis; activation of JAK protein; response to cAMP; peptidyl-tyrosine phosphorylation; blood vessel endothelial cell migration; positive regulation of translation; apoptosis; response to lithium ion; negative regulation of potassium ion transport; protein amino acid autophosphorylation; response to hormone stimulus; regulation of calcium-mediated signaling; positive regulation of JNK cascade; signal transduction; positive regulation of synaptic transmission, glutamatergic; negative regulation of cell proliferation; positive regulation of cell proliferation; response to stress; angiogenesis; positive regulation of cell-matrix adhesion; regulation of cell adhesion; integrin-mediated signaling pathway; epidermal growth factor receptor signaling pathway; MAPKKK cascade; positive regulation of phosphoinositide 3-kinase activity; signal complex assembly; response to cocaine; oocyte maturation; regulation of release of sequestered calcium ion into cytosol; response to hydrogen peroxide; positive regulation of actin filament polymerization; positive regulation of protein kinase activity; response to hypoxia; stress fiber formation; innate immune response; cellular defense response; sprouting angiogenesis; vascular endothelial growth factor receptor signaling pathway; positive regulation of cell migration

Research Articles on PTK2B	**1.** LFA-1 cross-linking recruits and activates FAK1 and PYK2 to phosphorylate LAT selectively on a single Y-171 site that binds to the GRB2-SKAP1 complex and limits dwell times of T-cells with dendritic cells
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