

PI 3 Kinase p85a protein

Catalog No :	YD0082
Reactivity :	Human
Applications :	WB;SDS-PAGE
Gene Name :	PIK3R1
Protein Name :	PI3K p85a protein
Sequence :	Amino acid: 429-657, with his-MBP tag.
Human Gene Id :	5295
Human Swiss Prot No :	P27986
Mouse Swiss Prot No :	P26450
Formulation :	Liquid in PBS
Concentration :	SDS-PAGE >90%
Storage Stability :	-20 °C/6 month,-80 °C for long storage

Background : disease:Defects in PIK3R1 are a cause of severe insulin resistance.,domain:The SH3 domain mediates the binding to CBLB, and to HIV-1 Nef.,function:Binds to activated (phosphorylated) protein-Tyr kinases, through its SH2 domain, and acts as an adapter, mediating the association of the p110 catalytic unit to the plasma membrane. Necessary for the insulin-stimulated increase in glucose uptake and glycogen synthesis in insulin-sensitive tissues.,PTM:Polyubiquitinated in T-cells by CBLB; which does not promote proteasomal degradation but impairs association with CD28 and CD3Z upon T-cell activation.,similarity:Belongs to the PI3K p85 subunit family.,similarity:Contains 1 Rho-GAP domain.,similarity:Contains 1 SH3 domain.,similarity:Contains 2 SH2 domains.,subunit:Heterodimer of a p110 (catalytic) and a p85 (regulatory) subunits. Interacts with phosphorylated TOM1L1. Interacts with phosphorylated LIME1 upon TCR and/or BCR activation. Interacts with SOCS7. Interacts with RUFY3 (By similarity). Interacts with phosphorylated LAT, LAX1 and TRAT1 upon TCR activation. Interacts with CBLB. Interacts with HIV-1 Nef to activate the Nef associated p21-activated kinase (PAK). This interaction depends on the C-

terminus of both proteins and leads to increased production of HIV. Interacts with HCV NS5A. The SH2 domains interact with the YTHM motif of phosphorylated INSR in vitro. Also interacts with tyrosine-phosphorylated IGF1R in vitro. Interacts with CD28 and CD3Z upon T-cell activation. Interacts with IRS1 and phosphorylated IRS4, as well as with NISCH and HCST.,tissue specificity:Isoform 2 is expressed in skeletal muscle and brain, and at lower levels in kidney and cardiac muscle. Isoform 2 and isoform 4 are present in skeletal muscle (at protein level).

Function :

cell activation, regulation of cell-matrix adhesion, negative regulation of cell-matrix adhesion, immune system development, leukocyte differentiation, phospholipid metabolic process, glycerophospholipid metabolic process,phosphorus metabolic process, phosphate metabolic process, negative regulation of cell adhesion, cell surface receptor linked signal transduction, enzyme linked receptor protein signaling pathway, transmembrane receptor protein tyrosine kinase signaling pathway, intracellular signaling cascade, protein kinase cascade, insulin receptor signaling pathway, response to endogenous stimulus, response to hormone stimulus, response to organic substance,regulation of cell-substrate adhesion, negative regulation of cell-substrate adhesion, regulation of glucose transport,positive regulation of glucose transport, phosphoinositide 3-kinase cascade, phosphorylation, organophosphate

Expression :

Isoform 2 is expressed in skeletal muscle and brain, and at lower levels in kidney and cardiac muscle. Isoform 2 and isoform 4 are present in skeletal muscle (at protein level).

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