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PIK3R1 (animal-free) Mouse mAb

Catalog # AP96574

Product Information

Application	WB
Primary Accession	P26450
Other Accession	P26450
Reactivity	Rat, Human, Mouse
Host	Mouse
Clonality	Monoclonal
Calculated MW	83517
Physical State	Liquid
Immunogen	Recombinant mouse PI3K p85 Protein
Epitope Specificity	1-110/724
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the PI3K p85 subunit family. Contains 1 Rho-GAP domain. Contains 2 SH2 domains.
SUBUNIT	Heterodimer of a regulatory subunit PIK3R1 and a p110 catalytic subunit (PIK3CA, PIK3CB or PIK3CD). Interacts with FER. Interacts (via SH2 domain) with TEK/TIE2 (tyrosine phosphorylated). Interacts with PTK2/FAK1 (By similarity). Interacts with phosphorylated TOM1L1. Interacts with phosphorylated LIME1 upon TCR and/or BCR activation. Interacts with SOCS7. Interacts with RUFY3. Interacts (via SH2 domain) with CSF1R (tyrosine phosphorylated). Interacts with LYN (via SH3 domain); this enhances enzyme activity. 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. Interacts with FASLG, KIT and BCR. Interacts with AXL, FGFR1, FGFR2, FGFR3 and FGFR4 (phosphorylated). Interacts with FGR and HCK. Interacts with PDGFRA (tyrosine phosphorylated) and PDGFRB (tyrosine phosphorylated). Interacts with ERBB4 (phosphorylated). Interacts with NTRK1 (phosphorylated upon ligand-binding).
Post-translational modifications	Polyubiquitinated in T-cells by CBLB; which does not promote proteasomal degradation but impairs association with CD28 and CD3Z upon T-cell activation.Phosphorylated. Tyrosine phosphorylated in response to signaling by FGFR1, FGFR2, FGFR3 and FGFR4. Phosphorylated by CSF1R. Phosphorylated by ERBB4. Phosphorylated on tyrosine residues by TEK/TIE2. Dephosphorylated by PTPRJ. Phosphorylated by PIK3CA at Ser-608; phosphorylation is stimulated by insulin and PDGF. The relevance of phosphorylation by PIK3CA is however unclear. Phosphorylated in response to KIT and KITLG/SCF. Phosphorylated by FGR.
Important Note	This product as supplied is intended for research use only, not for use in

	human, therapeutic or diagnostic applications.
Background Descriptions	The enzyme phosphatidylinositol 3 kinase (PI3 kinase) is a lipid kinase that generates phosphatidylinositol 3, 4, 5-triphosphate in response to receptor activation in many signal transduction pathways. Class IA PI3Ks exist as a heterodimer of a catalytic 110 kDa (p110) and a regulatory p85 subunit (e.g. p85 alpha). p85 alpha is an adaptor molecule that regulates the activity of the catalytic p110 subunit by binding to phosphorylated receptor tyrosine kinases (RTKs) through its SH2 domain and mediating the interaction between p110 and the plasma membrane. p85 alpha is necessary for insulin-stimulated increase in glucose uptake and glycogen synthesis in insulin-sensitive tissues.

Additional Information

Gene ID	18708
Other Names	AGM7; GRB1; IMD36; p85; p85-ALPHA; p85alpha; PI3K; p50alpha; p55alpha; PI3KA; P85A_HUMAN; PIK3R1; PI3-kinase regulatory subunit alpha; PI3K regulatory subunit alpha; PtdIns-3-kinase regulatory subunit alpha; Phosphatidylinositol 3-kinase 85 kDa regulatory subunit alpha (PI3-kinase subunit p85-alpha | PtdIns-3-kinase regulatory subunit p85-alpha); P85A_MOUSE; P85A_RAT; phosphoinositide-3-kinase regulatory subunit 1; phosphoinositide-3-kinase, regulatory subunit 1 (alpha); phosphoinositide-3-kinase regulatory subunit alpha; growth factor receptor bound 1; PI3 kinase-associated p85
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Pik3r1
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 (PubMed:27708159). Plays an important role in signaling in response to FGFR1, FGFR2, FGFR3, FGFR4, KITLG/SCF, KIT, PDGFRA and PDGFRB. Likewise, plays a role in ITGB2 signaling (By similarity). Modulates the cellular response to ER stress by promoting nuclear translocation of XBP1 isoform 2 in a ER stress- and/or insulin-dependent manner during metabolic overloading in the liver and hence plays a role in glucose tolerance improvement (PubMed:20348926).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:P27986}.

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