



SUNLONG

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Mouse Anti-PIK3R1 (animal-free)antibody

SLM-77002M

Product Name PIK3R1 (animal-free)

Chinese Name 磷脂酰肌醇激酶单克隆抗体 (无动物源)

Alias P85A_HUMAN; Phosphatidylinositol 3-kinase regulatory subunit alpha; GRB1; 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); PI 3-kinase p85 α ; PI 3-kinase p85 α ; PI 3-kinase p85- α ; SH3_PI3K_p85alpha; PI3-kinase p85 subunit alpha; phosphoinositide-3-kinase regulatory subunit 1; p85; AGM7; IMD36; p85-ALPHA; PI 3 Kinase p85 alpha;

Research Area Tumour Cell biology immunology Signal transduction Kinases and Phosphatases

Immunogen Species Mouse

Clonality Monoclonal

Clone NO. 5C11

React Species Human, Mouse, Rat,
WB=1:500-2000

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 80kDa

Cellular localization The nucleus cytoplasmic The cell membrane

Form Liquid

Concentration 1mg/ml

immunogen Recombinant mouse PI3K p85 Protein: 1-110/724

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

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

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

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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.

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.

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).

Product Detail

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).

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.

Similarity:

Belongs to the PI3K p85 subunit family.

Contains 1 Rho-GAP domain.

Contains 2 SH2 domains.

SWISS:

P27986

Gene ID:

18708

Database links:

[Entrez Gene: 5295](#) Human

[Entrez Gene: 18708](#) Mouse

[Entrez Gene: 25513](#) Rat

[Omim: 171833](#) Human

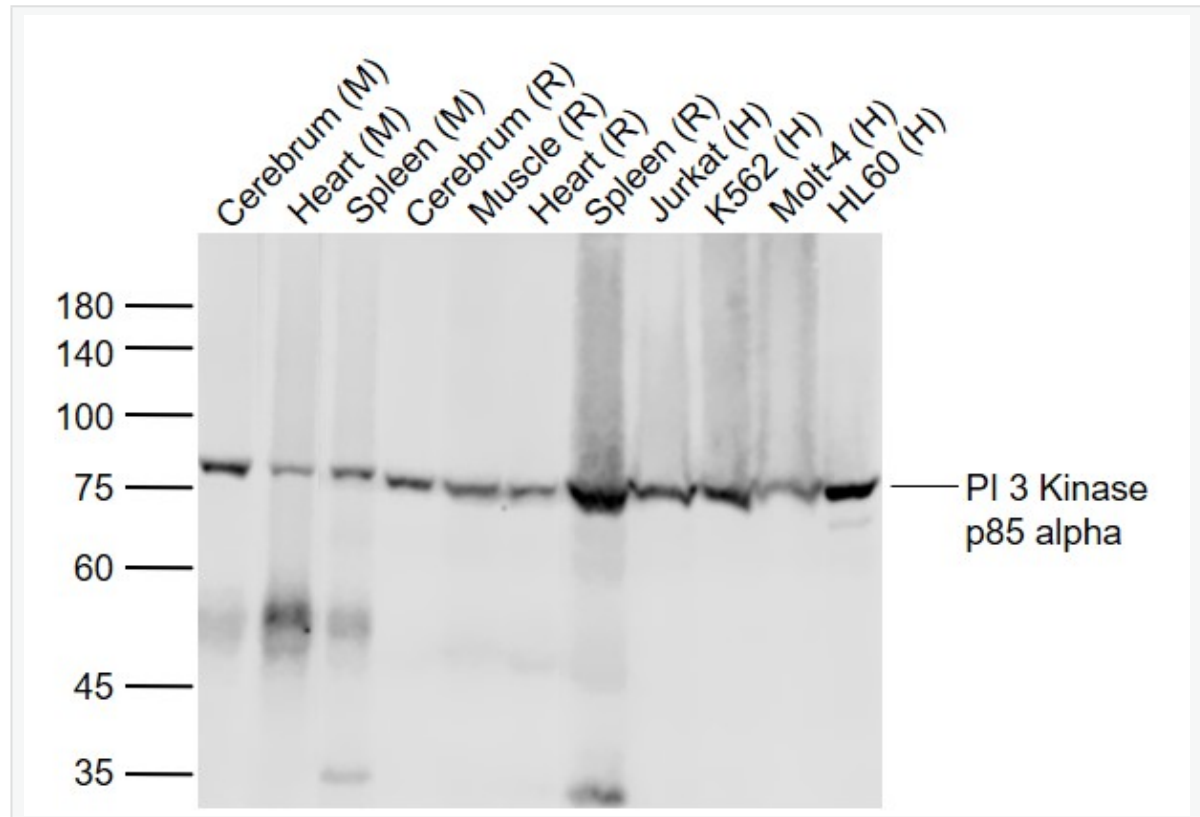
[SwissProt: P27986](#) Human

[SwissProt: P26450](#) Mouse

[SwissProt: Q63787](#) Rat

[Unigene: 132225](#) Human

**Product
Picture**



Sample:

Lane 1: Mouse Cerebrum tissue lysates

Lane 2: Mouse Heart tissue lysates

Lane 3: Mouse Spleen tissue lysates

Lane 4: Rat Cerebrum tissue lysates

Lane 5: Rat Muscle tissue lysates

Lane 6: Rat Heart tissue lysates

Lane 7: Rat Spleen tissue lysates

Lane 8: Human Jurkat cell lysates

Lane 9: Human K562 cell lysates

Lane 10: Human Molt-4 cell lysates

Lane 11: Human HL60 cell lysates

Primary: Anti-PI 3 Kinase p85 alpha (SLM-77002M) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

Predicted band size: 80 kD

Observed band size: 80 kD