Web: www.taiclone.com
Tel: +886-2-2735-9682
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Phospho-PI3K p85 alpha (Tyr607) Antibody

Catalog No: tcaa5223

Available Sizes

Size: 100µl

Size: 200µl

Specifications

Research Area:
Signal transduction.

Species Reactivity:
Human,Mouse,Rat,Pig

Host Species:
Rabbit

Immunogen / Amino acids:
A synthesized peptide derived from human PI3-kinase p85- alpha around the phosphorylation site of Tyrosine 607.

Clonality:
Polyclonal

Form:
Liquid

Storage Buffer:
pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol

Concentration:
1mg/ml

Recommended Dilution:
WB 1:500-1:2000
IHC 1:50-1:200
IF/ICC 1:100-500
ELISA(peptide) 1:20000-1:40000

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Tested Application:
WB,IHC,IF/ICC,ELISA

Storage Instruction:
Store at -20 °C, Avoid repeated Freezing/Thawing

Alternative Names:
GRB 1; GRB1; p85 alpha; p85; P85A_HUMAN; Phosphatidylinositol 3 kinase associated p 85 alpha; Phosphatidylinositol 3 kinase regulatory 1; Phosphatidylinositol 3 kinase regulatory subunit alpha; Phosphatidylinositol 3 kinase regulatory subunit polypeptide 1 (p85 alpha); Phosphatidylinositol 3-kinase 85 kDa regulatory subunit alpha; Phosphatidylinositol 3-kinase regulatory subunit alpha; Phosphoinositide 3 kinase regulatory subunit 1 (alpha); Phosphoinositide 3 kinase regulatory subunit 1 (p85 alpha); Phosphoinositide 3 kinase regulatory subunit 1; Phosphoinositide 3 kinase regulatory subunit polypeptide 1 (p85 alpha); PI3 kinase p85 subunit alpha; PI3-kinase regulatory subunit alpha; PI3-kinase subunit p85-alpha; PI3K; PI3K regulatory subunit alpha; Pik3r1; PtdIns 3 kinase p85 alpha; PtdIns-3-kinase regulatory subunit alpha; PtdIns-3-kinase regulatory subunit p85-alpha;

SwissProt:
P27986

Gene ID:
5295

Predicted Molecular Weight:
84kDa.

Observed Molecular Weight:
80kDa

Sequence:
MSAEGYQYRA LYDYKKEREE DIDLHLGDIL TVNKGSLVAL GFSDGQEARP EEIGWLNGYN ETTGERGDFP GTYVEYIGRK KISPPTPKPR PPRPLPVAPG SSKTEADVEQ QALTLPDLAE QFAPPDIAPP LLIKLVEAIE KKGLECSTLY RTQSSSNLAE LRQLLDCDTP SVDLEMIDVH VLADAFKRYL LDLPNPVIPA AVYSEMISLA PEVQSSEEYI QLLKKLIRSP SIPHQYWLTL QYLLKHFFKL SQTSSKNLLN ARVLSEIFSP MLFRFSAASS DNTENLIKVI EILISTEWNE RQPAPALPPK PPKPTTVANN GMNNNMSLQD AEWYWGDISR EEVNEKLRDT ADGTFLVRDA STKMHGDYTL TLRKGGNNKL IKIFHRDGKY GFSDPLTFSS VVELINHYRN ESLAQYNPKL DVKLLYPVSK YQQDQVVKED NIEAVGKKLH EYNTQFQEKS REYDRLYEEY TRTSQEIQMK RTAIEAFNET IKIFEEQCQT QERYSKEYIE KFKREGNEKE IQRIMHNYDK LKSRISEIID SRRRLEEDLK KQAAEYREID KRMNSIKPDL IQLRKTRDQY LMWLTQKGVR QKKLNEWLGN ENTEDQYSLV EDDEDLPHHD EKTWNVGSSN RNKAENLLRG KRDGTFLVRE SSKQGCYACS VVVDGEVKHC VINKTATGYG FAEPYNLYSS LKELVLHYQH TSLVQHNDSL NVTLAYPVYA QQRR

Purification:
affinity purification

Modification:
Polyubiquitinated in T-cells by CBLB; which does not promote proteasomal degradation but impairs association with

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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 (By similarity). Phosphorylated in response to KIT and KITLG/SCF. Phosphorylated by FGR.

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. 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 (PubMed:17626883, PubMed:19805105, PubMed:7518429). 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:20348923).

Notes

Subunit Structure: Interacts (via SH2 domain) with CSF1R (tyrosine phosphorylated). Interacts with PIK3R2; the interaction is dissociated in an insulin-dependent manner (By similarity). Interacts with XBP1 isoform 2; the interaction is direct and induces translocation of XBP1 isoform 2 into the nucleus in a ER stress- and/or insulin-dependent but PI3K-independent manner (PubMed:20348923). 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 (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. 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). Interacts with herpes simplex virus 1 UL46 and varicella virus ORF12; these interactions activate the PI3K/AKT pathway. Interacts with FAM83B; activates the PI3K/AKT signaling cascade (PubMed:23676467).

Product Description

Phospho-PI3-kinase p85- alpha (Tyr607) Antibody detects endogenous levels of PI3-kinase p85- alpha only when phosphorylated at Tyrosine 607.

PIK3R1 is a regulatory subunit of phosphoinositide-3-kinase. Mediates binding to a subset of tyrosine-phosphorylated proteins through its SH2 domain. Acts as an adapter, mediating the association of the p110 catalytic unit of the alpha, beta and delta enzymes to the plasma membrane, where p110 phosphorylates inositol lipids. May play an additional role in the regulation of the actin cytoskeleton. Necessary for the insulin-stimulated increase in glucose uptake and glycogen synthesis in insulin-sensitive tissues. Its SH2 domains interacts with the YTHM motif of phosphorylated INSR in vitro. Defects in PIK3R1 are a cause of severe insulin resistance. Four alternatively spliced isoforms have been described.

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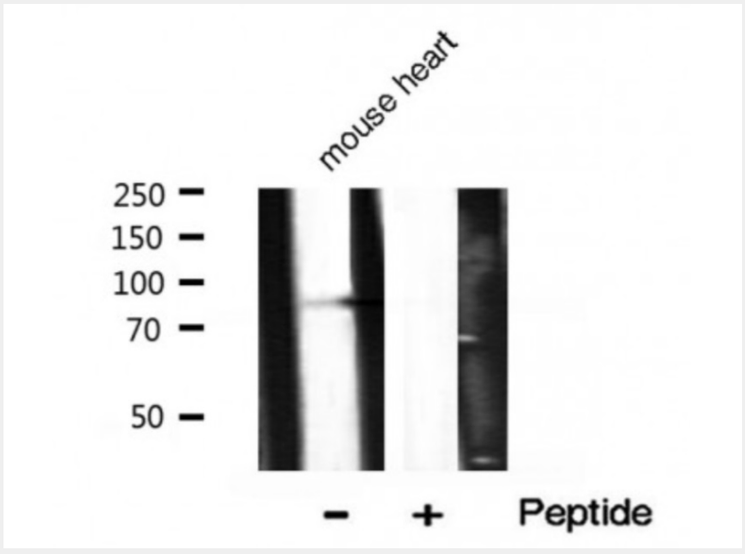
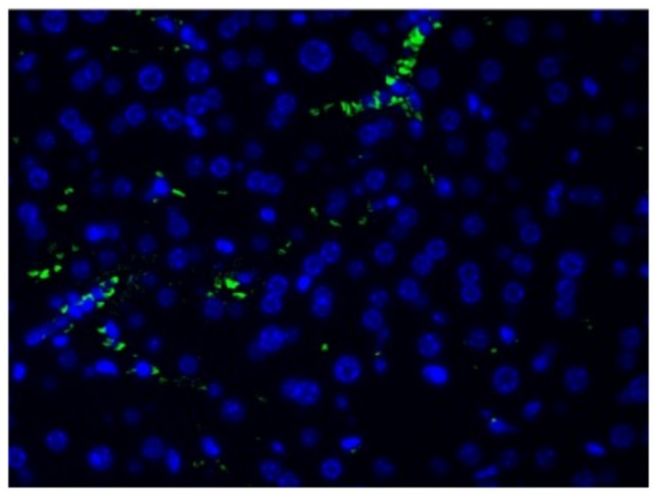
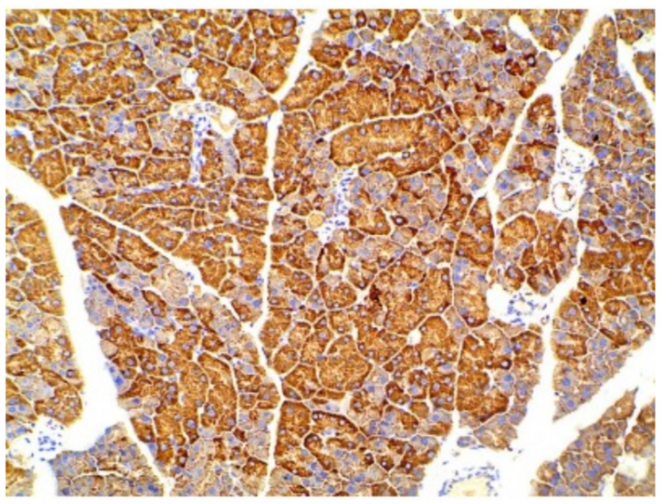


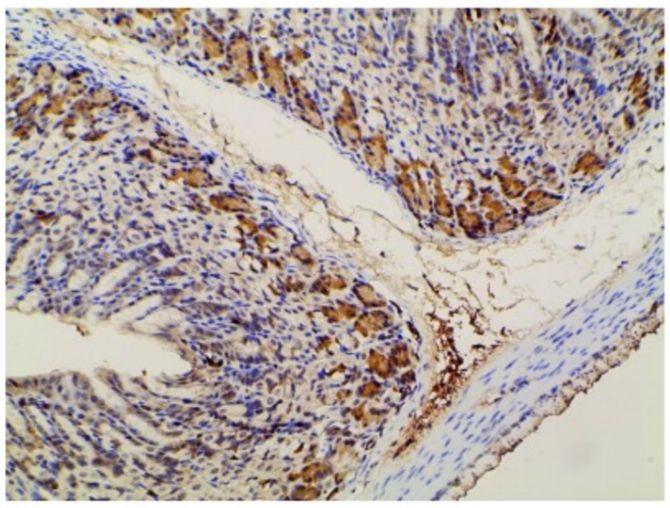
Western blot analysis of Phospho-PI3K p85 alpha (Tyr607) expression in Mouse heart tissue lysate



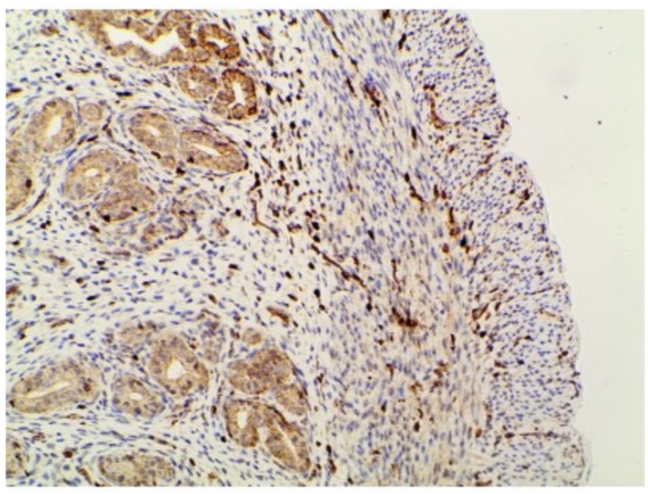
tcaa5223 at 1/200 staining human frozen liver tissue section by IHC-Fr. The sample was incubated with the primary antibody (1/200 in BSA) for 1 hour. An Alexa Fluor 488®-conjugated Goat anti-rabbit antibody was used as the secondary.



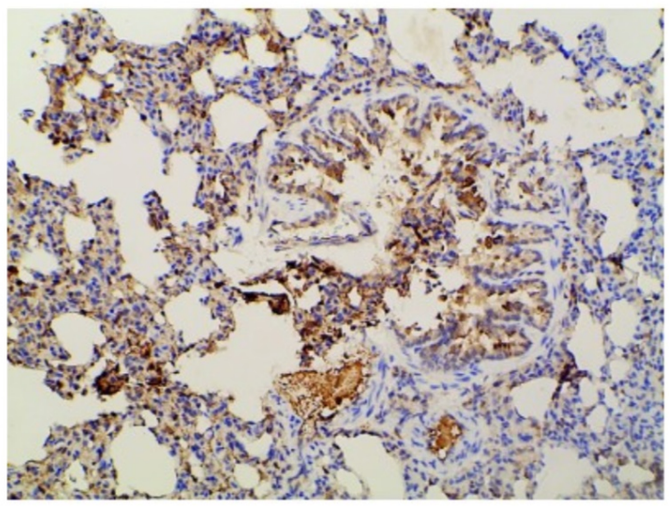
tcaa5223 at 1/100 staining mouse pancreatic tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



tcaa5223 at 1/100 staining mouse gastric tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



tcaa5223 at 1/100 staining rat uterine tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



tcaa5223 at 1/100 staining rat lung tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.

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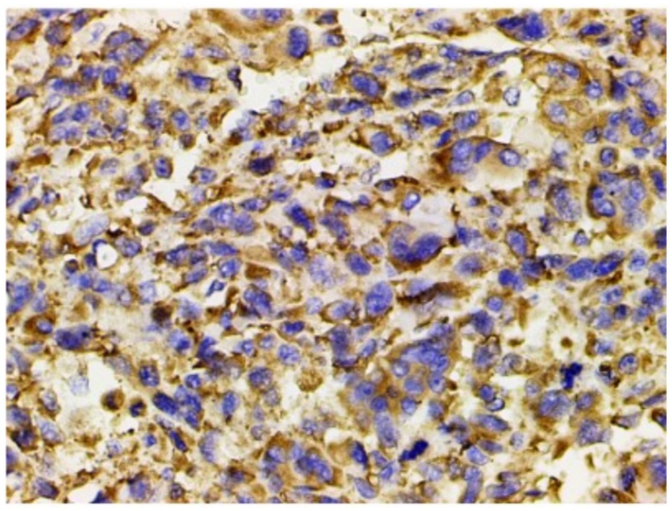
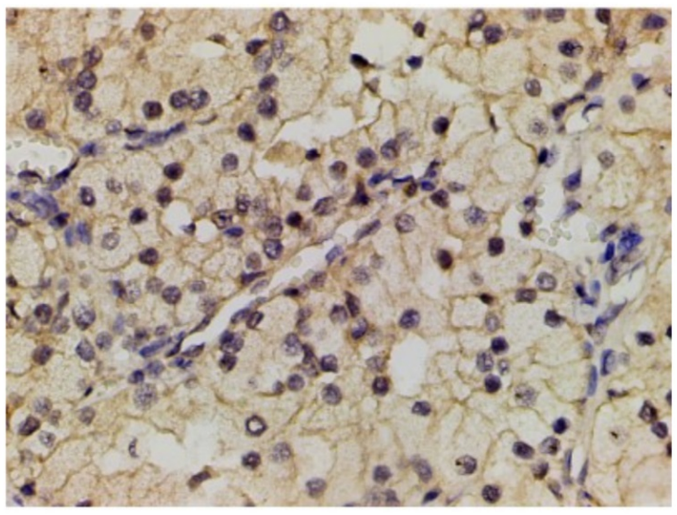
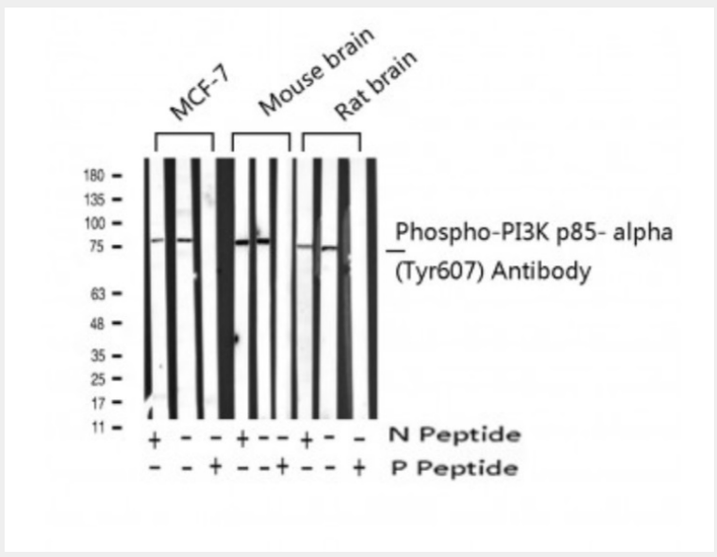


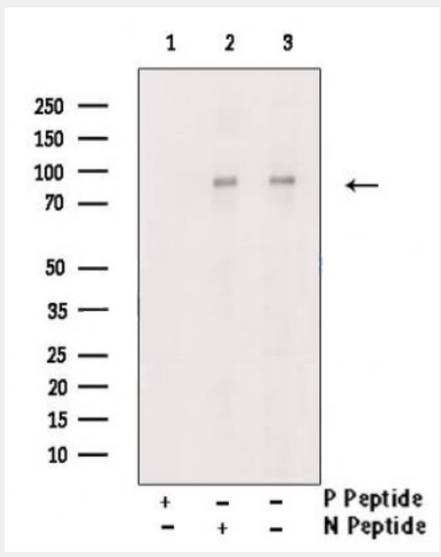
tcaa5223 at 1/200 staining human osteosarcoma tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



tcaa5223 at 1/200 staining human renal clear cell carcinoma tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



Western blot analysis of extracts from MCF7/mouse brain/rat brain, using Phospho-PI3K p85 alpha (Tyr607) Antibody. -/+ means absence or presence of N peptide(non-phospho peptide) and P peptide(phospho peptide)



Western blot analysis of extracts from H2O2 treated Hela cells, using Phospho-PI3K p85 alpha (Tyr607) Antibody. Lane1 was treated with phospho-blocking peptide, Lane2 was treated with non-phospho-blocking peptide.