



## Rabbit Anti-PI3 Kinase p110 beta antibody

SL6423R

<b>Product Name:</b>	PI3 Kinase p110 beta
<b>Chinese Name:</b>	磷脂酰肌醇激酶 (PI3K $\beta$ ) 抗体
<b>Alias:</b>	PI3-kinase p110 subunit beta; p110 BETA; p110Beta; PI3K beta; Phosphatidylinositol 3 kinase catalytic beta polypeptide; Phosphatidylinositol 4 5 bisphosphate 3 kinase 110 kDa catalytic subunit beta; Phosphatidylinositol 4 5 bisphosphate 3 kinase catalytic subunit beta isoform; Phosphatidylinositol-4; Phosphoinositide 3 kinase catalytic beta polypeptide; PI3 kinase p110 subunit beta; PI3-kinase subunit beta; PI3K; PI3K beta; PI3K-beta; PI3Kbeta; PI3KCB; PIK3C1; Pik3cb; PK3CB_HUMAN; PtdIns 3 kinase p110; PtdIns-3-kinase subunit beta; PtdIns-3-kinase subunit p110-beta; 5-bisphosphate 3-kinase 110 kDa catalytic subunit beta; 5-bisphosphate 3-kinase catalytic subunit beta isoform.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Pig,Cow,Horse,Rabbit,Sheep,
<b>Applications:</b>	ELISA=1:500-1000IHC-P=1:400-800 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	123kDa
<b>Cellular localization:</b>	The nucleuscytoplasmic
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human PI3 Kinase p110 beta:701-800/1070
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.

**PubMed:**

[PubMed](#)

This gene encodes an isoform of the catalytic subunit of phosphoinositide 3-kinase (PI3K). These kinases are important in signaling pathways involving receptors on the outer membrane of eukaryotic cells and are named for their catalytic subunit. The encoded protein is the catalytic subunit for PI3Kbeta (PI3KB). PI3KB has been shown to be part of the activation pathway in neutrophils which have bound immune complexes at sites of injury or infection. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2011].

**Function:**

Phosphoinositide-3-kinase (PI3K) that phosphorylates PtdIns (Phosphatidylinositol), PtdIns4P (Phosphatidylinositol 4-phosphate) and PtdIns(4,5)P2 (Phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3). PIP3 plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Involved in the activation of AKT1 upon stimulation by G-protein coupled receptors (GPCRs) ligands such as CXCL12, sphingosine 1-phosphate, and lysophosphatidic acid. May also act downstream receptor tyrosine kinases. Required in different signaling pathways for stable platelet adhesion and aggregation. Plays a role in platelet activation signaling triggered by GPCRs, alpha-IIb/beta-3 integrins (ITGA2B/ ITGB3) and ITAM (immunoreceptor tyrosine-based activation motif)-bearing receptors such as GP6. Regulates the strength of adhesion of ITGA2B/ ITGB3 activated receptors necessary for the cellular transmission of contractile forces. Required for platelet aggregation induced by F2 (thrombin) and thromboxane A2 (TXA2). Has a role in cell survival. May have a role in cell migration. Involved in the early stage of autophagosome formation. Modulates the intracellular level of PtdIns3P (Phosphatidylinositol 3-phosphate) and activates PIK3C3 kinase activity. May act as a scaffold, independently of its lipid kinase activity to positively regulate autophagy. May have a role in insulin signaling as scaffolding protein in which the lipid kinase activity is not required. May have a kinase-independent function in regulating cell proliferation and in clathrin-mediated endocytosis. Mediator of oncogenic signal in cell lines lacking PTEN. The lipid kinase activity is necessary for its role in oncogenic transformation. Required for the growth of ERBB2 and RAS driven tumors.

**Product Detail:**

**Subunit:**

Heterodimer of a catalytic subunit PIK3CB and a p85 regulatory subunit (PIK3R1, PIK3R2 or PIK3R3). Interaction with PIK3R2 is required for nuclear localization and nuclear export. Part of a complex with PIK3R1 and PTEN. Binding to PTEN may antagonize the lipid kinase activity under normal growth conditions. Part of a complex involved in autophagosome formation composed of PIK3C3 and PIK3R4. Interacts with BECN1, ATG14 and RAB5A.

**Subcellular Location:**

Cytoplasm. Nucleus. Note=Interaction with PIK3R2 is required for nuclear localization and export.

**Tissue Specificity:**

Expressed ubiquitously.

**Post-translational modifications:**

Phosphorylation at Ser-1070 down-regulates lipid kinase activity.

**Similarity:**

Belongs to the PI3/PI4-kinase family.

Contains 1 C2 PI3K-type domain.

Contains 1 PI3K-ABD domain.

Contains 1 PI3K-RBD domain.

Contains 1 PI3K/PI4K domain.

Contains 1 PIK helical domain.

**SWISS:**

P42338

**Gene ID:**

5291

**Database links:**

[Entrez Gene: 5291](#)Human

[Entrez Gene: 74769](#)Mouse

[Entrez Gene: 85243](#)Rat

[Omim: 602925](#)Human

[SwissProt: P42338](#)Human

[SwissProt: Q24JU2](#)Human

[SwissProt: Q3U4Q1](#)Mouse

[SwissProt: Q8BTI9](#)Mouse

[SwissProt: Q9Z1L0](#)Rat

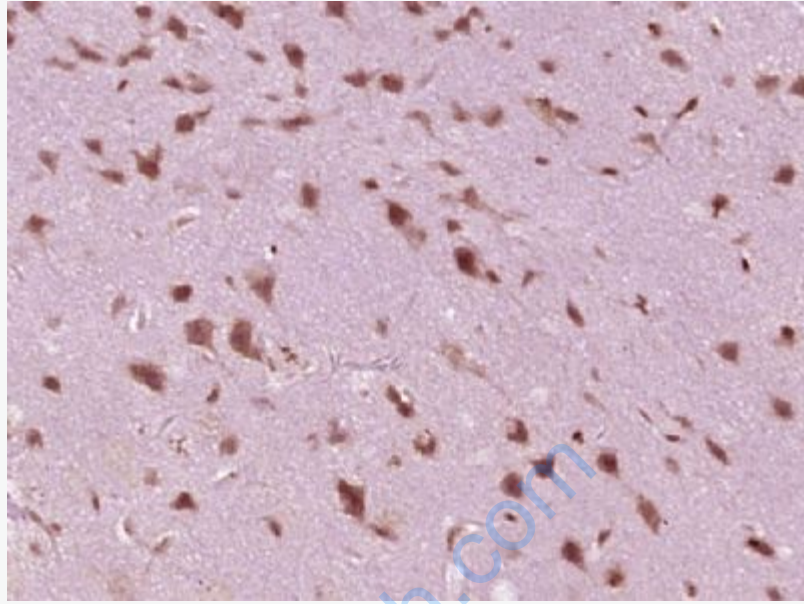
[Unigene: 239818](#)Human

[Unigene: 213128](#)Mouse

[Unigene: 44268](#)Rat

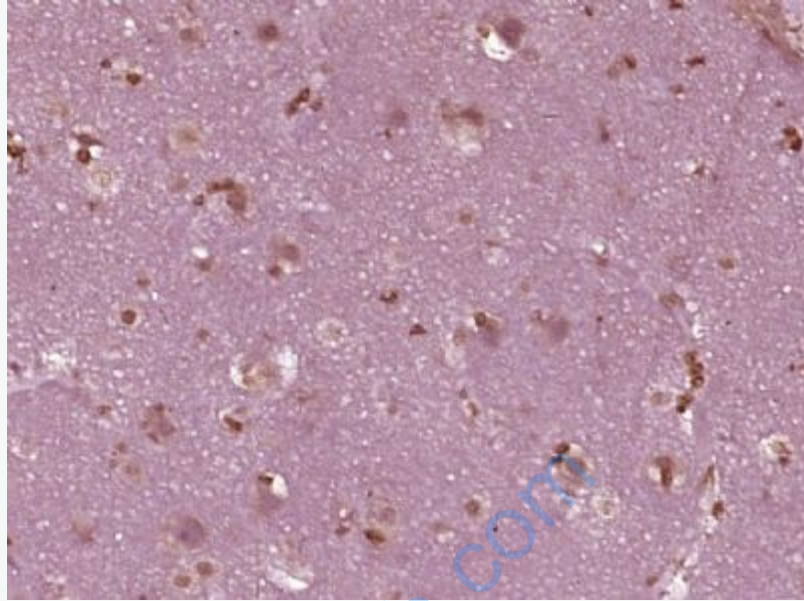
**Important Note:**

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

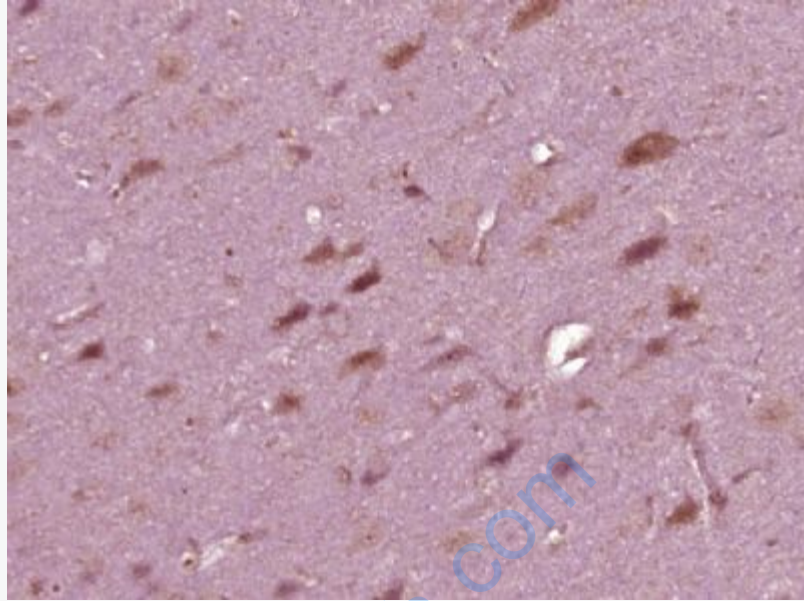


**Picture:**

Paraformaldehyde-fixed, paraffin embedded (mouse brain tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PK3CB) Polyclonal Antibody, Unconjugated (SL6423R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (human brain glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PK3CB) Polyclonal Antibody, Unconjugated (SL6423R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat brain tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PK3CB) Polyclonal Antibody, Unconjugated (SL6423R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.