SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-PI3 Kinase p110 beta antibody

Catalog Number: SL10657R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	PI3 Kinase p110 beta
Immunogen:	KLH conjugated synthetic peptide derived from human PI3 Kinase p110 beta: 971-1070/1070
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB (1:500-1000) IHC-P (1:100-500) IHC-F (1:100-500) IF (1:100-500) ICC/IF (1:50-200) Not yet tested in other applications. Optimal working dilutions must be determined by the end user.
Reactivity:	Human, Mouse, Rat
Predicted MW.:	123kDa
Subcellular Location:	The nucleus cytoplasmic
Background:	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

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	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 PDPK1, 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. **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.

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	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. **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

[VALIDATION IMAGES]

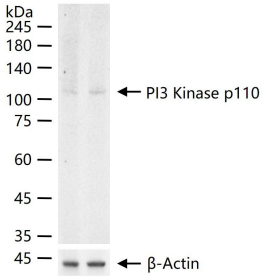


Figure 1. 25 ug total protein per lane of various lysates (see on figure) probed with PI3 Kinase p110 polyclonal antibody, unconjugated (SL10657R) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min

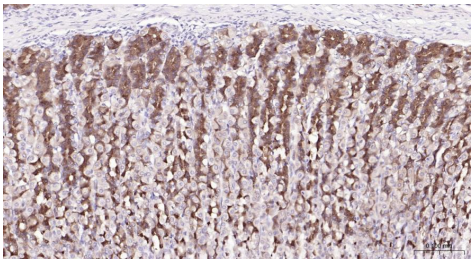


Figure 2. Paraformaldehyde-fixed, paraffin embedded Rat Stomach; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

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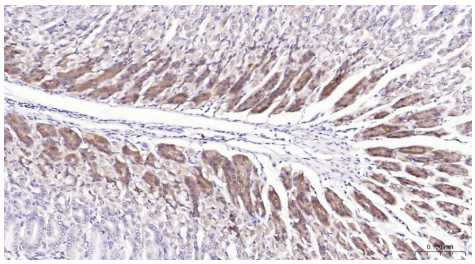


Figure 3. Paraformaldehyde-fixed, paraffin embedded Mouse Stomach; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

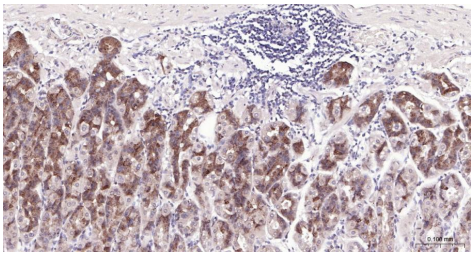


Figure 4. Paraformaldehyde-fixed, paraffin embedded Human Fundus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

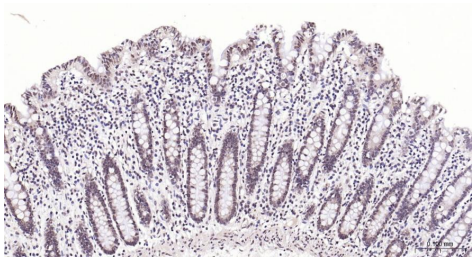


Figure 5. Paraformaldehyde-fixed, paraffin embedded Human Colon; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

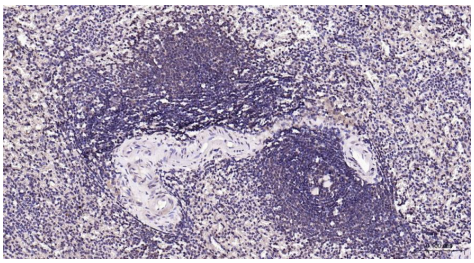


Figure 6. Paraformaldehyde-fixed, paraffin embedded Human Spleen; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

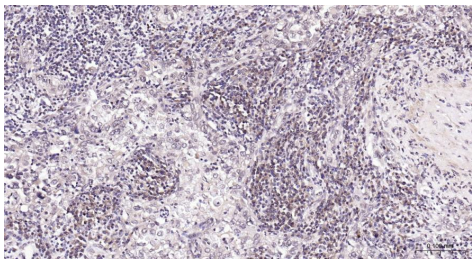


Figure 7. Paraformaldehyde-fixed, paraffin embedded Human Cervical Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

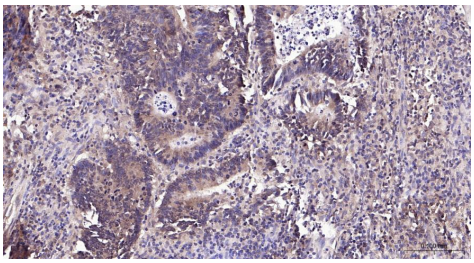


Figure 8. Paraformaldehyde-fixed, paraffin embedded Human Colon Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

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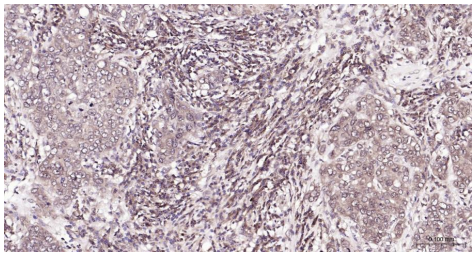


Figure 9. Paraformaldehyde-fixed, paraffin embedded Human Breast Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

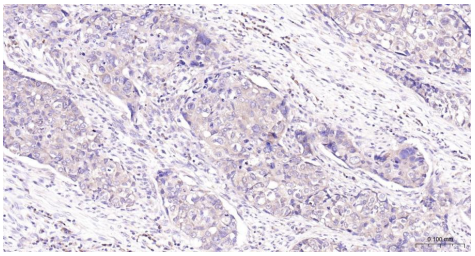


Figure 10. Paraformaldehyde-fixed, paraffin embedded Human Esophagus Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

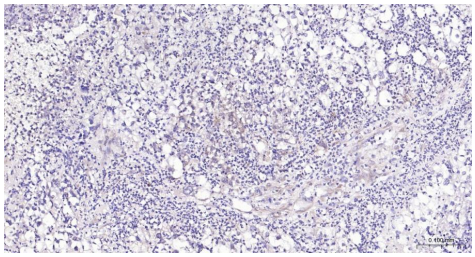


Figure 11. Paraformaldehyde-fixed, paraffin embedded Human Endometrial Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PI3 Kinase p110 beta Polyclonal Antibody, Unconjugated (SL10657R) at 1:100 overnight at 4°C, followed by conjugation to the SL0295G-HRP and DAB (C-0010) staining

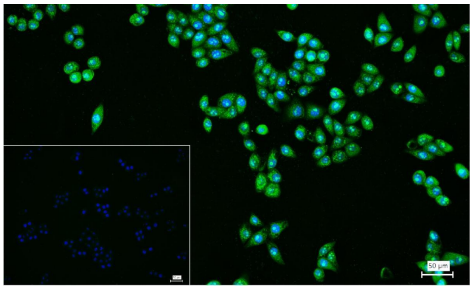


Figure 12. 4% Paraformaldehyde-fixed MCF-7 (H) cell; Triton X-100 at r.t. for 20 min; Antibody incubation with (PI3-kinase p110 subunit beta) polyclonal Antibody, unconjugated (SL10657R) 1:200, 90 min at 37°C; followed by conjugated Goat Anti-Rabbit IgG antibody (green, SL0295G-FITC) at 37°C for 90 min, DAPI (blue, C02-04002) was used to stain the cell nuclei. PBS instead of the primary antibody was used as the blank control

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