

**PI 3-kinase p110 $\alpha$  Polyclonal Antibody**  
Catalog # AP71892**Specification****PI 3-kinase p110 $\alpha$  Polyclonal Antibody - Product Information**

Application	IF
Primary Accession	<a href="#">P42336</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal

**PI 3-kinase p110 $\alpha$  Polyclonal Antibody - Additional Information**

Gene ID 5290

**Other Names**

PIK3CA; Phosphatidylinositol 4; 5-bisphosphate 3-kinase catalytic subunit alpha isoform; PI3-kinase subunit alpha; PI3K-alpha; PI3Kalpha; PtdIns-3-kinase subunit alpha; Phosphatidylinositol 4, 5-bisphosphate 3-kinase 110 kDa catalytic subunit

**Dilution**

IF~IF: 1:50-200 Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**PI 3-kinase p110 $\alpha$  Polyclonal Antibody - Protein Information**

Name PIK3CA

**Function**

Phosphoinositide-3-kinase (PI3K) phosphorylates phosphatidylinositol (PI) and its phosphorylated derivatives at position 3 of the inositol ring to produce 3-phosphoinositides (PubMed: [15135396](http://www.uniprot.org/citations/15135396), PubMed: [23936502](http://www.uniprot.org/citations/23936502), PubMed: [28676499](http://www.uniprot.org/citations/28676499)). Uses ATP and PtdIns(4,5)P2 (phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3) (PubMed: [15135396](http://www.uniprot.org/citations/15135396), PubMed: [28676499](http://www.uniprot.org/citations/28676499)). 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. Participates in cellular signaling in response to various growth factors. Involved in the activation of AKT1 upon stimulation by receptor tyrosine kinases ligands such as EGF, insulin, IGF1, VEGFA and PDGF. Involved in signaling via

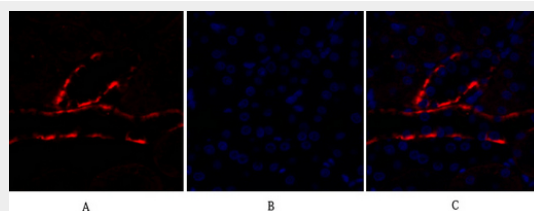
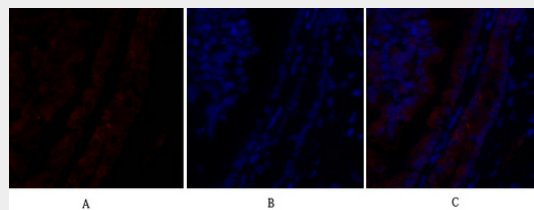
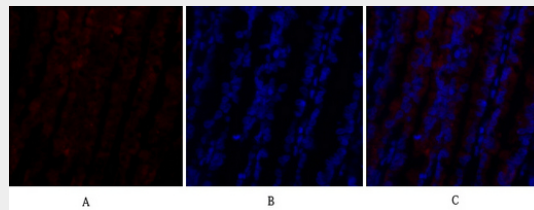
insulin-receptor substrate (IRS) proteins. Essential in endothelial cell migration during vascular development through VEGFA signaling, possibly by regulating RhoA activity. Required for lymphatic vasculature development, possibly by binding to RAS and by activation by EGF and FGF2, but not by PDGF. Regulates invadopodia formation through the PDPK1-AKT1 pathway. Participates in cardiomyogenesis in embryonic stem cells through a AKT1 pathway. Participates in vasculogenesis in embryonic stem cells through PDK1 and protein kinase C pathway. In addition to its lipid kinase activity, it displays a serine-protein kinase activity that results in the autophosphorylation of the p85alpha regulatory subunit as well as phosphorylation of other proteins such as 4EBP1, H-Ras, the IL-3 beta c receptor and possibly others (PubMed:<a href="http://www.uniprot.org/citations/23936502" target="\_blank">23936502</a>, PubMed:<a href="http://www.uniprot.org/citations/28676499" target="\_blank">28676499</a>). Plays a role in the positive regulation of phagocytosis and pinocytosis (By similarity).

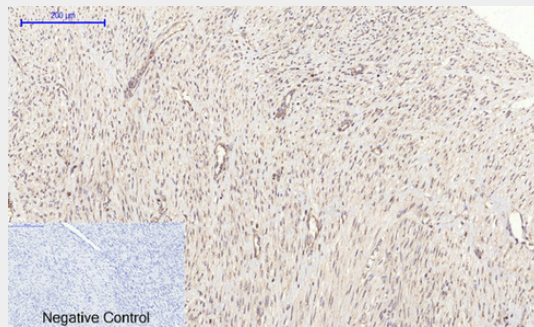
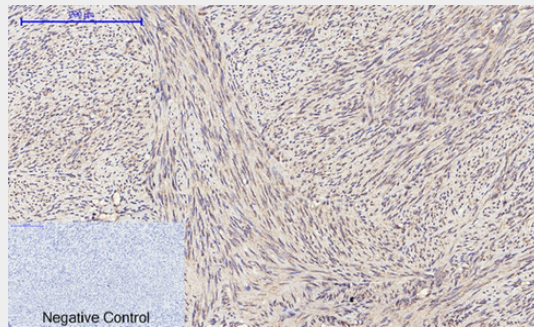
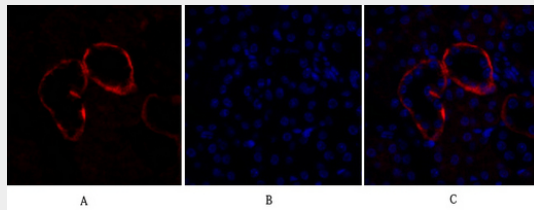
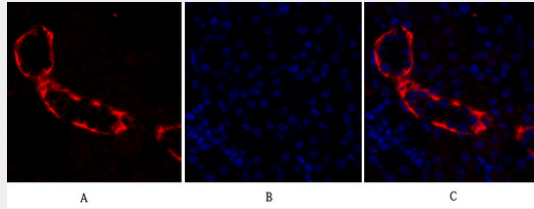
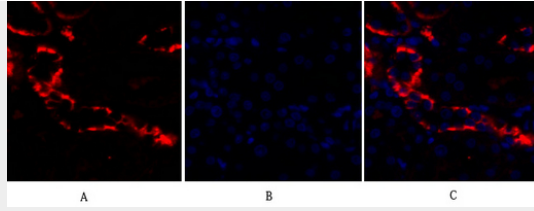
### PI 3-kinase p110 $\alpha$ Polyclonal Antibody - Protocols

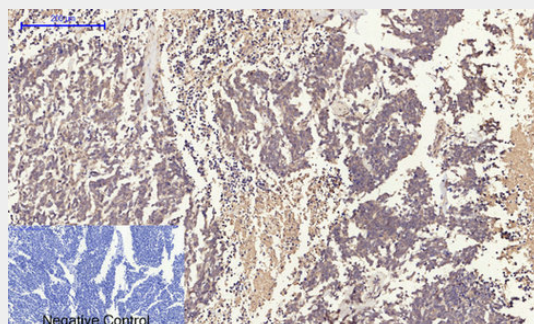
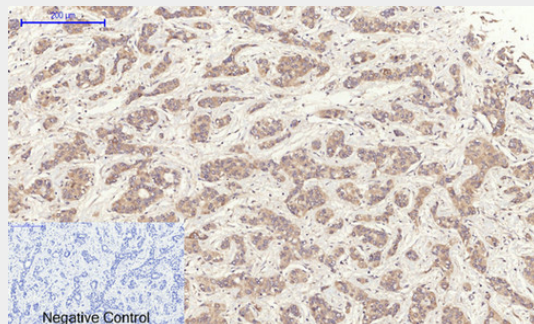
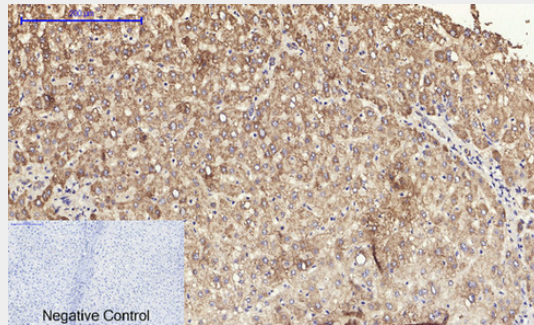
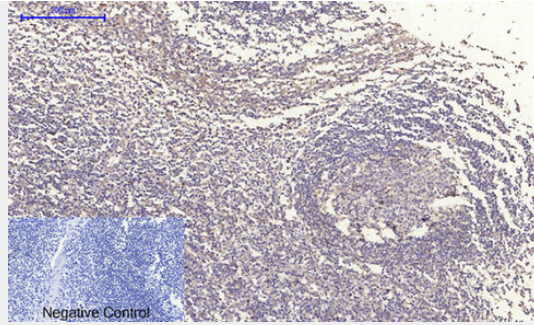
Provided below are standard protocols that you may find useful for product applications.

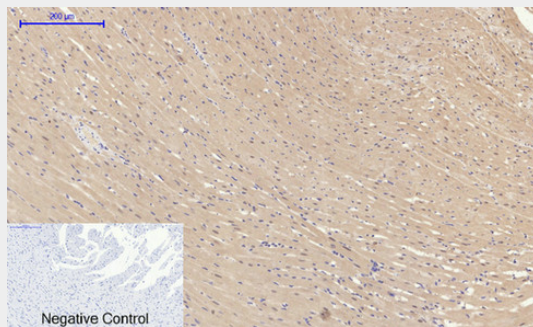
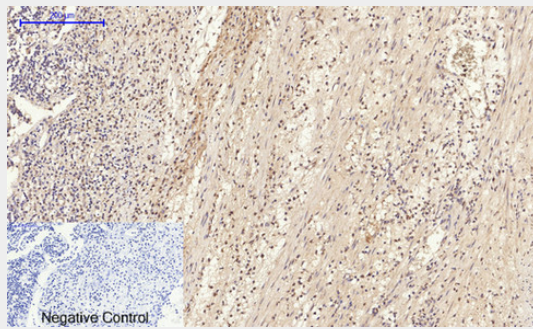
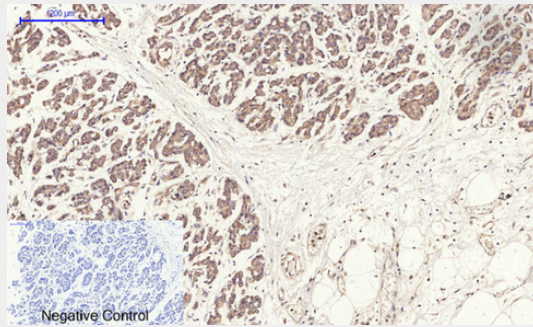
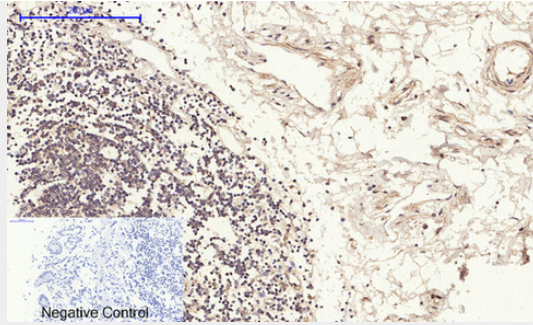
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

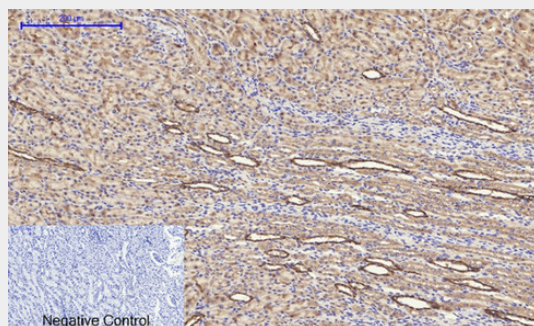
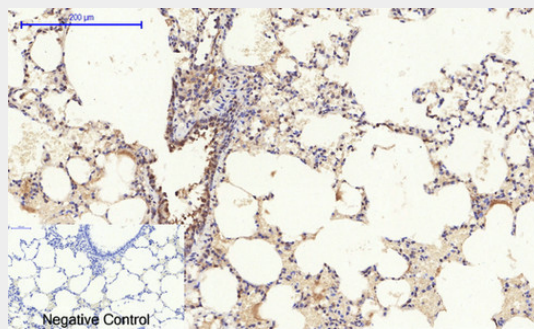
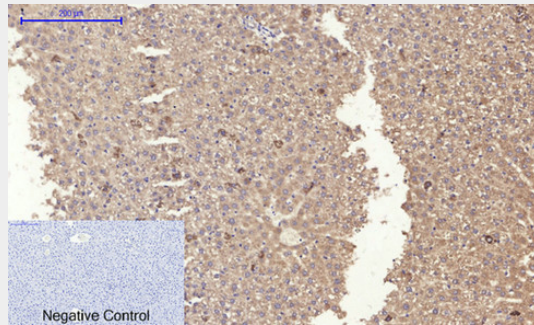
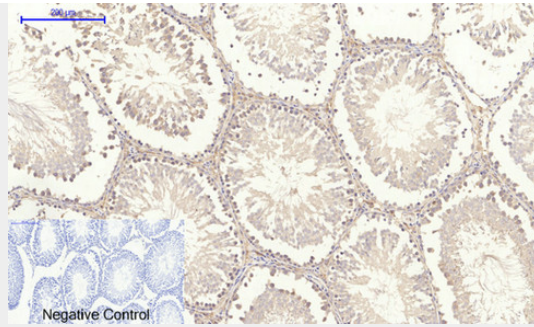
### PI 3-kinase p110 $\alpha$ Polyclonal Antibody - Images

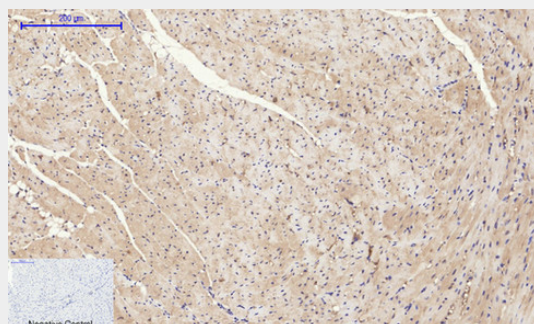
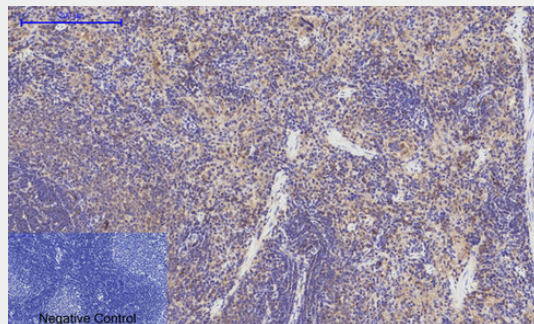
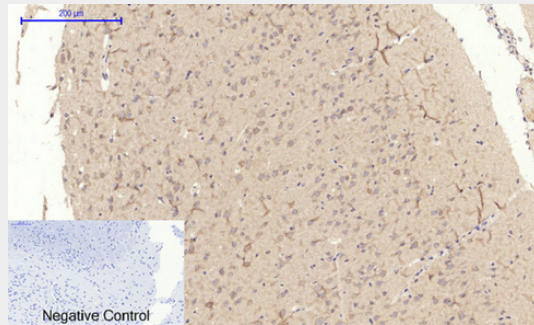
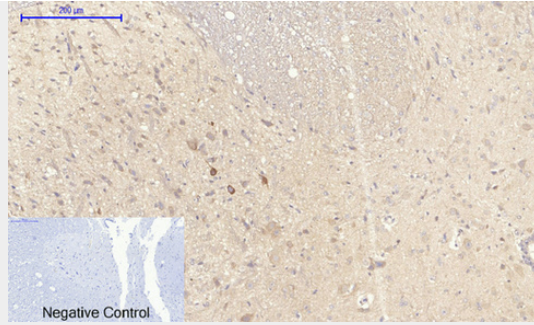


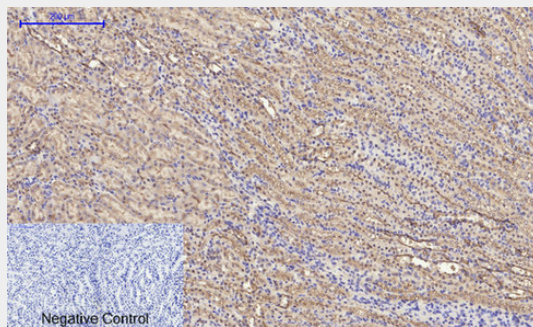
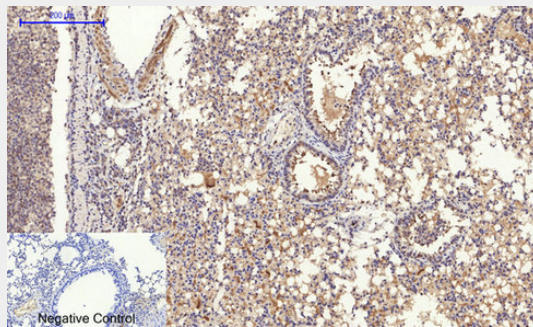
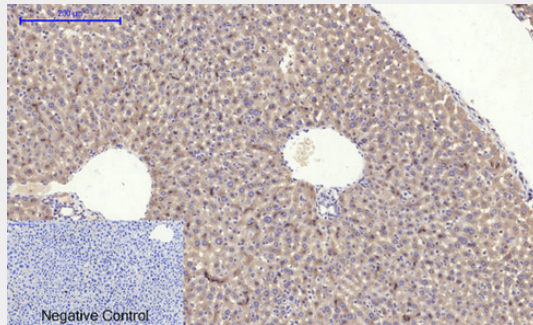
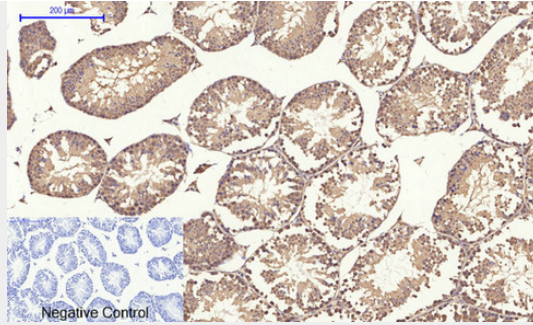




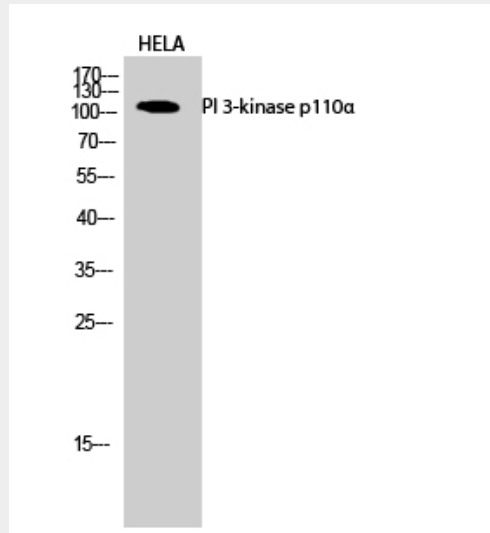
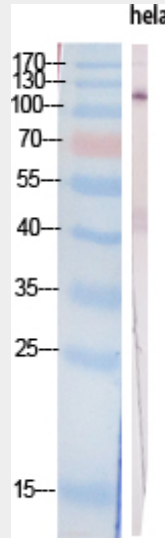
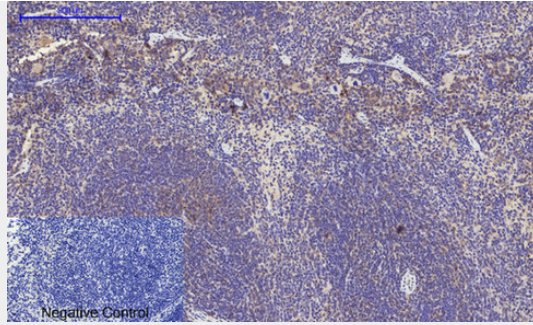












### PI 3-kinase p110α Polyclonal Antibody - Background

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 PDPK1, activating signaling

cascades involved in cell growth, survival, proliferation, motility and morphology. Participates in cellular signaling in response to various growth factors. Involved in the activation of AKT1 upon stimulation by receptor tyrosine kinases ligands such as EGF, insulin, IGF1, VEGFA and PDGF. Involved in signaling via insulin-receptor substrate (IRS) proteins. Essential in endothelial cell migration during vascular development through VEGFA signaling, possibly by regulating RhoA activity. Required for lymphatic vasculature development, possibly by binding to RAS and by activation by EGF and FGF2, but not by PDGF. Regulates invadopodia formation through the PDK1-AKT1 pathway. Participates in cardiomyogenesis in embryonic stem cells through a AKT1 pathway. Participates in vasculogenesis in embryonic stem cells through PDK1 and protein kinase C pathway. Also has serine-protein kinase activity: phosphorylates PIK3R1 (p85alpha regulatory subunit), EIF4EBP1 and HRAS. Plays a role in the positive regulation of phagocytosis and pinocytosis (By similarity).