

Product Name: PI 3 kinase p110 alpha (8X14) Rabbit Monoclonal Antibody**Catalog #: AMRe16092**

For research use only.

Summary

Description	Recombinant rabbit monoclonal antibody
Host	Rabbit
Application	WB,ICC/IF,IP
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Concentration	0.5mg/ml. The concentration of this product may be batch-dependent.
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1000-1:5000,ICC/IF 1:100-1:200,IP 1:20-1:50
Molecular Weight	124kDa

Antigen Information

Gene Name	PIK3CA
Alternative Names	PI 3 Kinase catalytic subunit alpha; phosphoinositide-3-kinase catalytic alpha polypeptide; PI3-kinase p110 alpha; PI3K; PI3K p110-alpha; PK3CA; PIK3CA; PtdIns-3-kinase p110
Gene ID	5290.0
SwissProt ID	P42336
Immunogen	A synthetic peptide of human PI 3 Kinase catalytic subunit alpha

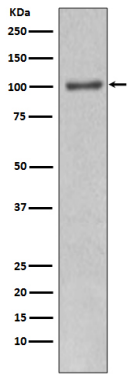
Background

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 PDK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Participates in cellular signaling in response to various growth factors. Phosphoinositide-3-kinase (PI3K) phosphorylates phosphatidylinositol (PI) and its phosphorylated derivatives at position 3 of the inositol ring to produce 3-phosphoinositides (PubMed:15135396, PubMed:23936502, PubMed:28676499). Uses ATP and PtdIns(4,5)P₂ (phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP₃) (PubMed:15135396, PubMed: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 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. 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:23936502, PubMed:28676499). Plays a role in the positive regulation of phagocytosis and pinocytosis (By similarity).

Research Area

Inositol phosphate metabolism;ErbB_HER;Chemokine;Phosphatidylinositol signaling system;mTOR;Apoptosis_Inhibition;Apoptosis_Mitochondrial;Apoptosis_Overview;VEGF;Focal adhesion;Toll_Like;Jak_STAT;Natural killer cell mediated cytotoxicity;T_Cell_Receptor;B_Cell_Antigen;Fc epsilon RI;Fc gamma R-mediated phagocytosis;Leukocyte transendothelial migration;Neurotrophin;Regulates Actin and Cytoskeleton;Insulin_Receptor;Progesterone-mediated oocyte maturation;Type II diabetes mellitus;Aldosterone-regulated sodium reabsorption;Pathways in cancer;Colorectal cancer;Renal cell carcinoma;Pancreatic cancer;Endometrial cancer;Glioma;Prostate cancer;Melanoma;Chronic myeloid leukemia;Acute myeloid leukemia;Small cell lung cancer;Non-small cell lung cancer;

Image Data



Western blot analysis of PI 3 kinase p110 alpha expression in Jurkat cell lysate. Western blot analysis of PI 3 kinase p110 alpha expression in Jurkat cell lysate.