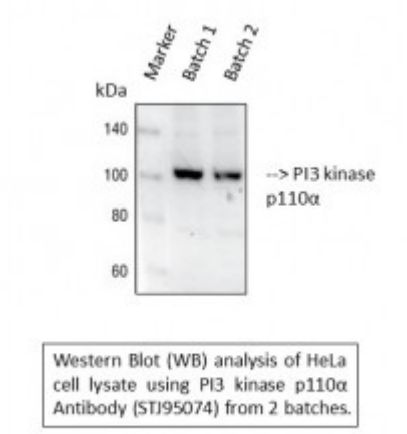
Anti-PI 3-kinase p11 alpha antibody



Western Blot (WB) analysis of HeLa cell lysate using PI3 kinase p110α Antibody (STJ95074) from 2 batches.

Description	PI 3-kinase p110alpha is a protein encoded by the PIK3CA gene which is approximately 124,2 kDa. PI 3-kinase p110alpha is localised to the cytoplasm and plasma membrane. It is involved in RET signalling, downstream signalling of activated FGFR2, regulation of lipid metabolism, insulin signalling-generic cascades and development HGF signalling pathway. It is a phosphoinositide-3-kinase that generates PIP3 which plays role in recruiting PH domain-containing proteins to the membrane, including AKT1 and PDPK1, that activate signalling cascades involved in cell growth, survival, proliferation, motility and morphology. PI 3-kinase p110alpha is expressed in the lung, nervous system, intestine, lymph node and kidney. Mutations in the PIK3CA gene may result in colorectal cancer and Cowden syndrome. STJ95074 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. This polyclonal antibody detects endogenous levels of PI 3-kinase p110alpha protein.
Model	STJ95074
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human PI 3-kinase p110alpha.
Immunogen Region	Internal
Gene ID	5290
Gene Symbol	PIK3CA
Dilution range	WB 1:500-1:2000IHC 1:100-1:300ELISA 1:40000

Specificity	PI 3-kinase p110alpha Polyclonal Antibody detects endogenous levels of PI 3-kinase p110alpha protein.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	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 subun
Molecular Weight	110 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:8975OMIM:114480
Alternative Names	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 subun
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 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 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. 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 .
Sequence and Domain Family	The PI3K-ABD domain and the PI3K-RBD domain interact with the PI3K/PI4K kinase domain. The C2 PI3K-type domain may facilitate the recruitment to the plasma membrane. The inhibitory interactions with PIK3R1 are mediated by the PI3K-ABD domain and the C2 PI3K-type domain with the iSH2 (inter-SH2) region of PIK3R1, and the C2 PI3K-type domain, the PI3K helical domain, and the PI3K/PI4K kinase domain with the nSH2 (N-

terminal SH2) region of PIK3R1.