

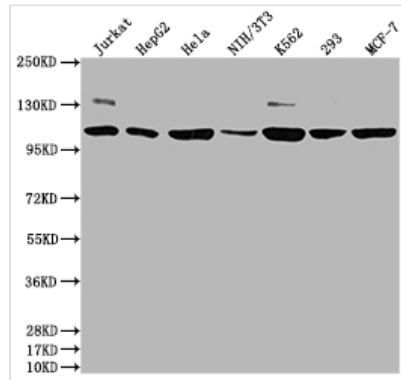


PIK3CA Recombinant Monoclonal Antibody

Product Code	CSB-RA578819A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P42336
Immunogen	A synthesized peptide derived from human PI 3 Kinase catalytic subunit alpha
Species Reactivity	Human, Mouse
Tested Applications	ELISA, WB, IF; Recommended dilution: WB:1:500-1:5000, IF:1:20-1:200
Relevance	<p>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. 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).</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Immunology; Signal transduction
Gene Names	PIK3CA
Clone No.	10E5



Image



Western Blot

Positive WB detected in: Jurkat whole cell lysate, HepG2 whole cell lysate, HeLa whole cell lysate, NIH/3T3 whole cell lysate, K562 whole cell lysate, 293 whole cell lysate, MCF-7 whole cell lysate

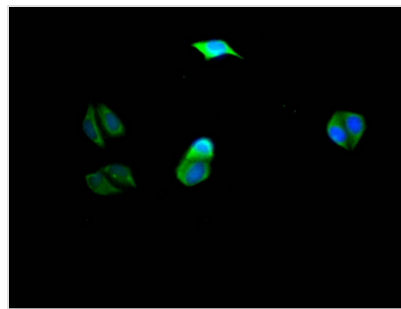
All lanes: PIK3CA antibody at 1:1500

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 125 kDa

Observed band size: 110 kDa



Immunofluorescence staining of HeLa Cells with CSB-RA578819A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeated by 0.2% TritonX-100, and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

PIK3CA is a critical component of the PI3K pathway that is involved in carcinogenesis and metastasis. It regulates tumor growth and progression through the PI3K pathway. Somatic mutations in PIK3CA can generally be found in several types of cancer, including brain, breast, liver, and colon carcinomas. Overexpression of PIK3CA facilitates epithelial to mesenchymal transition (EMT) and enriches the cancer stem cell (CSC) population. PIK3CA gene alteration and PIK3CA upregulation are frequently been detected in bladder cancer and promote the proliferation, invasion, and metastasis of bladder cancer cells.

The main steps in the production of this PIK3CA recombinant antibody include immunization; harvest of positive spleen cells; obtaining the antibody sequence by screening and sequencing; expression of the target antibody in mammalian cells; purification. The PIK3CA antibody was produced recombinantly and has many advantages: high reproducibility, specificity and scalability. And has been validated in ELISA, WB, IF.