

Anti-PIK3CB (RABBIT) Antibody
PIK3CB Antibody
Catalog # ASR5573**Specification****Anti-PIK3CB (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, E, I, LCI
Application Note	Anti-PIK3C beta Antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 122.7 kDa in size corresponding to PI3K beta by western blotting in the appropriate cell lysate or extract.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified PIK3C- β antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an N-terminal region of human Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit beta isoform.
Preservative	0.01% (w/v) Sodium Azide

Anti-PIK3CB (RABBIT) Antibody - Additional Information**Gene ID** 5291**Other Names**
5291**Purity**

Anti-PIK3C beta was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody is specific for human PIK3C beta protein. A BLAST analysis was used to suggest cross-reactivity with PI3K-beta based on a 100% homology from human sources with the immunizing sequence. Expect partial cross reactivity to PIK3C beta from mouse and rat (93% homology) sources. Cross-reactivity with PIK3C beta from other sources has not been determined.

Storage Condition

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after

standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-PIK3CB (RABBIT) Antibody - Protein Information

Name PIK3CB

Synonyms PIK3C1

Function

Phosphoinositide-3-kinase (PI3K) phosphorylates phosphatidylinositol derivatives at position 3 of the inositol ring to produce 3-phosphoinositides (PubMed: [15135396](http://www.uniprot.org/citations/15135396)). 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)). 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. 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. Also has a protein kinase activity showing autophosphorylation (PubMed: [12502714](http://www.uniprot.org/citations/12502714)).

Cellular Location

Cytoplasm. Nucleus. Note=Interaction with PIK3R2 is required for nuclear localization and export

Tissue Location

Expressed ubiquitously.

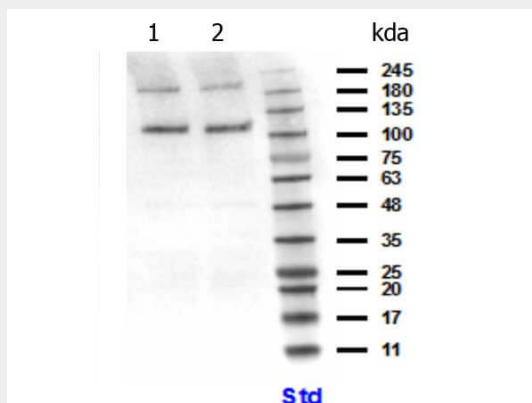
Anti-PIK3CB (RABBIT) Antibody - Protocols

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](#)

Anti-PIK3CB (RABBIT) Antibody - Images



Western Blot of Rabbit anti-PIK3CB antibody. Marker: Opal Pre-stained ladder (p/n MB-210-0500). Lane 1: HEK293 lysate (p/n W09-000-365). Lane 2: MDA-MB-435S WCL (p/n W09-001-A39). Load: 35 µg per lane. Primary antibody: PIK3CB antibody at 1:1,000 for 3hrs at RT. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:30,000 for 60 min at RT. Blocking Buffer: 1% Casein-TTBS (p/n MB-082) for 30 min at RT. Predicted/Observed size: 122 kDa for PIK3CB.

Anti-PIK3CB (RABBIT) Antibody - Background

PIK3CB is a catalytic subunit of phosphoinositide-3-kinase beta. PIK3CB catalyzes the production of phosphatidylinositol-3,4,5-triphosphate by phosphorylating phosphatidylinositol (PI), phosphatidylinositol-4-phosphate (PIP) and phosphatidylinositol-4,5-bisphosphate (PIP2). Growth factors and hormones trigger this phosphorylation event, which in turn coordinates cell growth, cell cycle entry, cell migration and cell survival. PTEN reverses this process. PI3K signaling pathway is constitutively activated in human cancers that have loss of function of PTEN. Furthermore, PI3KCB down regulation can suppress cell growth in malignant gliomas. Anti-PIK3C beta Antibody is suitable for researcher in Cancer, Immunology and Nuclear Signaling research.