

Rabbit PIK3CB Polyclonal Antibody | anti-PIK3CB antibody

PIK3CB Antibody

CATALOG # AAA325946	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

PIK3CB; Polyclonal Antibody; PIK3CB Antibody; 5-bisphosphate 3-kinase 110 kDa catalytic subunit beta; 5-bisphosphate 3-kinase catalytic subunit beta isoform; DKFZp779K1237; MGC133043; OTTHUMP00000216901; OTTHUMP00000216904; p110 BETA; p110Beta; Phosphatidylinositol 3 kinase catalytic beta polypeptide; Phosphatidylinositol 4 5 bisphosphate 3 kinase 110 kDa catalytic subunit beta; Phosphatidylinositol 4 5 bisphosphate 3 kinase catalytic subunit beta isoform; Phosphatidylinositol-4; Phosphoinositide 3 kinase catalytic beta polypeptide; PI3 kinase p110 subunit beta; PI3-kinase subunit beta; PI3K; PI3K beta; PI3K-beta; PI3Kbeta; PI3KCB; PIK3C1; Pik3cb; PK3CB_HUMAN; PtdIns 3 kinase p110; PtdIns-3-kinase subunit beta; PtdIns-3-kinase subunit p110-beta; anti-PIK3CB antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	PIK3CB antibody detects endogenous levels of total PIK3CB
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1070
Applicable Applications for anti-PIK3CB antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PIK3CB
Subcellular Location	Nucleus
Tissue Specificity	Expressed ubiquitously.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)

Western blot analysis of 293 using PIK3CB antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA325946 at 1/100 staining Human breast cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-PIK3CB antibody	Description: Phosphoinositide 3-kinase (PI3K) 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 (1). PTEN reverses this process, and the PI3K signaling pathway is constitutively activated in human cancers that have loss of function of PTEN (2). PI3Ks are composed of a catalytic subunit (p110) and a regulatory subunit. Various isoforms of the catalytic subunit (p110alpha, p110beta, p110gamma, and p110delta) have been isolated, and the regulatory subunits that associate with p110alpha, p110beta, and p110delta are p85alpha and p85beta (3). In contrast, p110gamma associates with a p101 regulatory subunit that is unrelated to p85. Furthermore, p110gamma is activated by betagamma subunits of heterotrimeric G proteins (4). p110? is widely distributed in tissue and plays an essential role in early embryonic development (5). p110? stimulates cell proliferation, invasive cell growth, and expression is increased in a number of tumors including glioblastomas (6-8). 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 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. Subunit Structure: Heterodimer of a catalytic subunit PIK3CB and a p85 regulatory subunit (PIK3R1, PIK3R2 or PIK3R3). Interaction with PIK3R2 is required for nuclear localization and nuclear export. Part of a complex with PIK3R1 and PTEN. Binding to PTEN may antagonize the lipid kinase activity under normal growth conditions. Part of a complex involved in autophagosome formation composed of PIK3C3 and PIK3R4 (By similarity). Interacts with BECN1, ATG14 and RAB5A (By similarity). Post-translational Modifications: Phosphorylation at Ser-1070 down-regulates lipid kinase activity. Similarity: 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; the C2 PI3K-type domain, the PI3K helical domain, and the PI3K/PI4K kinase domain with the nSH2 (N-terminal SH2) region of PIK3R1; and the PI3K/PI4K kinase domain with the cSH2 (C-terminal SH2) region of PIK3R1. The inhibitory interaction between the PI3K-ABD domain and the C2 PI3K-type domain with the iSH2 (inter-SH2) region of PIK3R1 is weak. The nuclear localization signal (NLS) is required for its function in cell survival. Belongs to the PI3/PI4-kinase family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	5453894
NCBI GeneID	5291
NCBI Accession #	NP_006210.1
NCBI GenBank Nucleotide #	NM_006219.2
UniProt Accession #	P42338; Q24JU2; D3DNF0
Molecular Weight	Observed: 123 kDa Predicted: 123 kDa
NCBI Official Full Name	phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit beta isoform isoform 1
NCBI Official Synonym Full Names	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta
NCBI Official Symbol	PIK3CB

NCBI Official Synonym Symbols	PI3K; PIK3C1; P110BETA; PI3KBETA
NCBI Protein Information	phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit beta isoform
UniProt Protein Name	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit beta isoform
UniProt Gene Name	PIK3CB
UniProt Synonym Gene Names	PIK3C1; PI3-kinase subunit beta; PI3K-beta; PI3Kbeta; PtdIns-3-kinase subunit beta; PtdIns-3-kinase subunit p110-beta; p110beta

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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