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Anti-PIK3CA Picoband Antibody
Catalog # ABO12005

Specification

Anti-PIK3CA Picoband Antibody - Product Information

Application	**WB**
Primary Accession	P42336
Host	**Rabbit**
Reactivity	**Human, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit alpha isoform(PIK3CA) detection. Tested with WB in Human;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-PIK3CA Picoband Antibody - Additional Information

Gene ID 5290

Other Names
Phosphatidylinositol 4, 5-bisphosphate 3-kinase catalytic subunit alpha isoform, PI3-kinase subunit alpha, PI3K-alpha, PI3Kalpha, PtdIns-3-kinase subunit alpha, 2.7.1.153, PIK3CA

Calculated MW
124284 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Rat

Protein Name
Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit alpha isoform

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human PIK3CA recombinant protein (Position: H936-N1068). Human PIK3CA shares 98% amino acid (aa) sequence identity with mouse PIK3CA.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution,**

at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Belongs to the PI3/PI4-kinase family.

Anti-PIK3CA Picoband Antibody - Protein Information

Name PIK3CA

Function
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 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. 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).

Anti-PIK3CA Picoband 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 Cytomety
- Cell Culture

Anti-PIK3CA Picoband Antibody - Images

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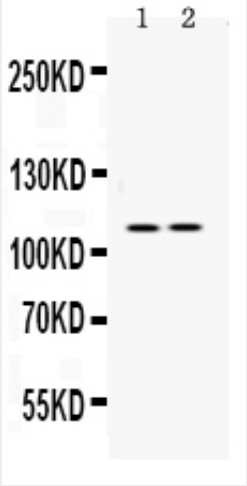

Anti- PIK3CAPicoband antibody, ABO12005, Western blottingAll lanes: Anti PIK3CA (ABO12005) at 0.5ug/mlLane 1: SW620 Whole Cell Lysate at 40ugLane 2: PC12 Whole Cell Lysate at 40ugPredicted bind size: 110KDObserved bind size: 110KD

Anti-PIK3CA Picoband Antibody - Background

Phosphatidylinositol-4,5-bisphosphate 3-kinase, also called PIK3CA, is composed of an 85 kDa regulatory subunit and a 110 kDa catalytic subunit. PIK3CA gene is mapped to 3q26.32. The protein encoded by this gene represents the catalytic subunit, which uses ATP to phosphorylate phosphatidylinositols (PtdIns), PtdIns4P andPtdIns(4,5)P2. Recent evidence has shown that the PIK3CA gene is mutated in a range of human cancers. It has been found to be oncogenic and has been implicated in cervical cancers. PIK3CA mutations in breast cancer may be a predictive marker to guide the selection of patients who would benefit from mTOR inhibitor therapy. In addition to that, the presence of PIK3CA mutation may predict response to aspirin therapy for colorectal cancer, indicating power and promise of Molecular Pathological Epidemiology (MPE)" approach as well as a complex interaction within the tumor microenvironment in this phenomenon."