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PIK3CD Antibody (Y485)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8020e

Specification

PIK3CD Antibody (Y485) - Product Information

Application	**IHC-P,E**
Primary Accession	O00329
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**

PIK3CD Antibody (Y485) - Additional Information

Gene ID 5293

Other Names
Phosphatidylinositol 4, 5-bisphosphate 3-kinase catalytic subunit delta isoform, PI3-kinase subunit delta, PI3K-delta, PI3Kdelta, PtdIns-3-kinase subunit delta, Phosphatidylinositol 4, 5-bisphosphate 3-kinase 110 kDa catalytic subunit delta, PtdIns-3-kinase subunit p110-delta, p110delta, PIK3CD

Target/Specificity
This PIK3CD antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide corresponding to amino acid residues surrounding Y485 of human PI3KCD.

Dilution
IHC-P~~1:10~50
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PIK3CD Antibody (Y485) is for research use only and not for use in diagnostic or therapeutic procedures.

PIK3CD Antibody (Y485) - Protein Information

Name PIK3CD

Function Phosphoinositide-3-kinase (PI3K) phosphorylates phosphatidylinositol (PI) and its phosphorylated derivatives at position 3 of the inositol ring to produce 3-phosphoinositides

(PubMed:9235916). Uses ATP and PtdIns(4,5)P2 (phosphatidylinositol 4,5- bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3) (PubMed:15135396). 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. Mediates immune responses. Plays a role in B-cell development, proliferation, migration, and function. Required for B-cell receptor (BCR) signaling. Mediates B-cell proliferation response to anti-IgM, anti-CD40 and IL4 stimulation. Promotes cytokine production in response to TLR4 and TLR9. Required for antibody class switch mediated by TLR9. Involved in the antigen presentation function of B-cells. Involved in B-cell chemotaxis in response to CXCL13 and sphingosine 1-phosphate (S1P). Required for proliferation, signaling and cytokine production of naive, effector and memory T-cells. Required for T-cell receptor (TCR) signaling. Mediates TCR signaling events at the immune synapse. Activation by TCR leads to antigen-dependent memory T-cell migration and retention to antigenic tissues. Together with PIK3CG participates in T-cell development. Contributes to T-helper cell expansion and differentiation. Required for T-cell migration mediated by homing receptors SELL/CD62L, CCR7 and S1PR1 and antigen dependent recruitment of T-cells. Together with PIK3CG is involved in natural killer (NK) cell development and migration towards the sites of inflammation. Participates in NK cell receptor activation. Plays a role in NK cell maturation and cytokine production. Together with PIK3CG is involved in neutrophil chemotaxis and extravasation. Together with PIK3CG participates in neutrophil respiratory burst. Plays important roles in mast-cell development and mast cell mediated allergic response. Involved in stem cell factor (SCF)-mediated proliferation, adhesion and migration. Required for allergen-IgE-induced degranulation and cytokine release. The lipid kinase activity is required for its biological function. Isoform 2 may be involved in stabilizing total RAS levels, resulting in increased ERK phosphorylation and increased PI3K activity.

Cellular Location
Cytoplasm.

Tissue Location
In humans, the highest levels of expression are seen in peripheral blood mononuclear cells, spleen, and thymus, and low levels of expression in testes, uterus, colon, and small intestine but not in other tissues examined including prostate, heart, brain, and liver (PubMed:9235916). Isoform 2 is expressed in normal thymus, lung and spleen tissues, and is detected at low levels in normal lysates from colon and ovarian biopsies, at elevated levels in lysates from colorectal tumors and is abundantly expressed in some ovarian tumors (at protein level). Both isoform 1 and isoform 2 are widely expressed Isoform 1 is expressed predominantly in leukocytes

PIK3CD Antibody (Y485) - 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

PIK3CD Antibody (Y485) - Images

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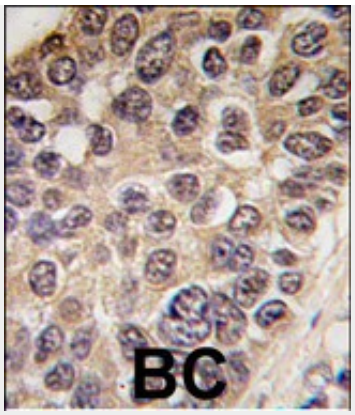

Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with PIK3CD-pY485, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

PIK3CD Antibody (Y485) - Background

PI3-Kinases (PI3-Ks) are a family of lipid kinases that are implicated in signal transduction. PI3-K consists of two subunits; p85 and p110. The p85 subunit localize PI3-K activity to the plasma membrane while the p110 subunit contains the catalytic domain of PI3-K. Four isoforms of p110 has been found; the alpha, beta, gamma, and the delta subunit. The delta isoform is predominantly expressed in leukocytes and has been shown to interact with p85 and GTP-bound Ras via its SH2/SH3 domain.

PIK3CD Antibody (Y485) - References

Vanhaesebroeck, B., et al., Proc. Natl. Acad. Sci. U.S.A. 94(9):4330-4335 (1997).
Chantry, D., et al., J. Biol. Chem. 272(31):19236-19241 (1997).