PIK3CD Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PIK3CD, Polyclonal Antibody
Full Product Name	PIK3CD (Y485) (Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit, delta isoform, PI3-kinase p110 subunit delta, PIK3CD) (AP)
Product Gene Name	anti-PIK3CD antibody
Product Synonym Names	Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit; delta isoform; PI3-kinase p110 subunit delta; PIK3CD
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase (AP).
Purity/Purification	Purified by Protein A Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	119,479 Da
OMIM	602839
3D Structure	ModBase 3D Structure for O00329
Immunogen	PIK3CD antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide corresponding to amino acid residues surrounding Y485 of human PI3KCD.
Conjugate	AP
Note	Preservative Free
Product Categories/Family for anti-PIK3CD antibody	Antibodies; Protein Kinases
Applications Tested/Suitable for anti-PIK3CD antibody	Immunohistochemistry (IHC), ELISA (EIA)
Application Notes for anti-PIK3CD antibody	IHC: 1:10-50 ELISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-PIK3CD antibody	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.
Product References and Citations for anti-PIK3CD antibody	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).

Other Notes	Small volumes of anti-PIK3CD antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PIK3CD purchase	MBS6333992 is an antibody targeting PIK3CD. Also known as PIK3CD (Y485) (Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit, delta isoform, PI3-kinase p110 subunit delta, PIK3CD) (AP). Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PIK3CD. It may not necessarily be applicable to this product.

NCBI GI #	67477424
NCBI GeneID	5293
NCBI Accession #	O00329.2
UniProt Primary Accession #	O00329
UniProt Secondary Accession #	O15445; Q5SR49; A6NCG0; G1FFP1
UniProt Related Accession #	O00329
NCBI Official Full Name	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit delta isoform
NCBI Official Synonym Full Names	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit delta
NCBI Official Symbol	PIK3CD
NCBI Official Synonym Symbols	APDS; PI3K; IMD14; p110D; P110DELTA
UniProt Protein Name	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit delta isoform
UniProt Synonym Protein Names	Phosphatidylinositol 4,5-bisphosphate 3-kinase 110 kDa catalytic subunit delta
Protein Family	Phosphatidylinositol 4,5-bisphosphate 3-kinase
UniProt Gene Name	PIK3CD
UniProt Synonym Gene Names	PI3-kinase subunit delta; PI3K-delta; PI3Kdelta; PtdIns-3-kinase subunit delta; PtdIns-3-kinase subunit p110-delta; p110delta
UniProt Entry Name	PK3CD_HUMAN
NCBI Protein Information	phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit delta isoform; PI3Kdelta; phosphoinositide-3-kinase C; PI3-kinase p110 subunit delta; ptdIns-3-kinase subunit p110-delta; phosphoinositide-3-kinase, catalytic, delta polypeptide variant p37d
NCBI Summary for PIK3CD	Phosphoinositide 3-kinases (PI3Ks) phosphorylate inositol lipids and are involved in the immune response. The protein encoded by this gene is a class I PI3K found primarily in leukocytes. Like other class I PI3Ks (p110-alpha p110-beta, and p110-gamma), the encoded protein binds p85 adapter proteins and GTP-bound RAS. However, unlike the other class I PI3Ks, this protein phosphorylates itself, not p85 protein.[provided by RefSeq, Jul 2010]

UniProt Comments for PIK3CD	PIK3CD: Phosphoinositide-3-kinase (PI3K) that phosphorylates PftdIns(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 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. Have 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. Have 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. Belongs to the PI3/PI4-kinase family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Carbohydrate Metabolism - inositol phosphate; Kinase, lipid; EC 2.7.1.153; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 1p36.2 Cellular Component: mast cell granule; plasma membrane; cytosol; phosphoinositide 3-kinase complex Molecular Function: protein binding; phosphatidylinositol-4,5-bisphosphate 3-kinase activity; 1-phosphatidylinositol-3-kinase activity; ATP binding; phosphoinositide 3-kinase activity; phosphatidylinositol-4-phosphate 3-kinase activity Biological Process: respiratory burst during defense response; phosphoinositide 3-kinase cascade; T cell activation; nerve growth factor receptor signaling pathway; natural killer cell activation; signal transduction; T cell receptor signaling pathway; protein amino acid phosphorylation; B cell receptor signaling pathway; B cell homeostasis; phosphoinositide phosphorylation; natural killer cell differentiation; phospholipid metabolic process; inflammatory response; T cell differentiation; epidermal growth factor receptor signaling pathway; neutrophil chemotaxis; adaptive immune response; phosphoinositide-mediated signaling; fibroblast growth factor receptor signaling pathway; B cell activation; mast cell chemotaxis; cytokine production; mast cell degranulation; phosphatidylinositol biosynthetic process; innate immune response Disease: Immunodeficiency 14
Research Articles on PIK3CD	**1.** PI3K p110delta uniquely promotes gain-of-function Shp2-induced GM-CSF hypersensitivity in a model of juvenile myelomonocytic leukemia.
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