

**Anti-PI3K Type III (RABBIT) Antibody**  
**PI3K type III Antibody**  
**Catalog # ASR5732****Specification**

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**Anti-PI3K Type III (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, E, I, LCI
Application Note	Anti-PI3K, type III antibody is tested in ELISA and Western Blot. This antibody is useful in Immunohistochemistry. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~237kDa corresponding to 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	Anti-PI3K, type III affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-terminal region of human PI3K, type III protein.
Stabilizer	50% (v/v) Glycerol

**Anti-PI3K Type III (RABBIT) Antibody - Additional Information****Gene ID** 200576**Purity**

Anti-PI3K, type III was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with mouse and human based on 100% sequence homology. Cross-reactivity with PI3K, type III 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-PI3K Type III (RABBIT) Antibody - Protein Information

**Name** PIKFYVE ([HGNC:23785](#))

**Synonyms** KIAA0981, PIP5K3

### Function

Dual specificity kinase implicated in myriad essential cellular processes such as maintenance of endomembrane homeostasis, and endocytic-vacuolar pathway, lysosomal trafficking, nuclear transport, stress- or hormone-induced signaling and cell cycle progression (PubMed:<a href="http://www.uniprot.org/citations/23086417" target="\_blank">23086417</a>). The PI(3,5)P2 regulatory complex regulates both the synthesis and turnover of phosphatidylinositol 3,5-bisphosphate (PtdIns(3,5)P2). Sole enzyme to catalyze the phosphorylation of phosphatidylinositol 3-phosphate on the fifth hydroxyl of the myo- inositol ring, to form (PtdIns(3,5)P2) (PubMed:<a href="http://www.uniprot.org/citations/17556371" target="\_blank">17556371</a>). Also catalyzes the phosphorylation of phosphatidylinositol on the fifth hydroxyl of the myo-inositol ring, to form phosphatidylinositol 5- phosphate (PtdIns(5)P) (PubMed:<a href="http://www.uniprot.org/citations/22621786" target="\_blank">22621786</a>). Has serine-protein kinase activity and is able to autophosphorylate and transphosphorylate. Autophosphorylation inhibits its own phosphatidylinositol 3-phosphate 5-kinase activity, stimulates FIG4 lipid phosphatase activity and down- regulates lipid product formation (PubMed:<a href="http://www.uniprot.org/citations/33098764" target="\_blank">33098764</a>). Involved in key endosome operations such as fission and fusion in the course of endosomal cargo transport (PubMed:<a href="http://www.uniprot.org/citations/22621786" target="\_blank">22621786</a>). Required for the maturation of early into late endosomes, phagosomes and lysosomes (PubMed:<a href="http://www.uniprot.org/citations/30612035" target="\_blank">30612035</a>). Regulates vacuole maturation and nutrient recovery following engulfment of macromolecules, initiates the redistribution of accumulated lysosomal contents back into the endosome network (PubMed:<a href="http://www.uniprot.org/citations/27623384" target="\_blank">27623384</a>). Critical regulator of the morphology, degradative activity, and protein turnover of the endolysosomal system in macrophages and platelets (By similarity). In neutrophils, critical to perform chemotaxis, generate ROS, and undertake phagosome fusion with lysosomes (PubMed:<a href="http://www.uniprot.org/citations/28779020" target="\_blank">28779020</a>). Plays a key role in the processing and presentation of antigens by major histocompatibility complex class II (MHC class II) mediated by CTSS (PubMed:<a href="http://www.uniprot.org/citations/30612035" target="\_blank">30612035</a>). Regulates melanosome biogenesis by controlling the delivery of proteins from the endosomal compartment to the melanosome (PubMed:<a href="http://www.uniprot.org/citations/29584722" target="\_blank">29584722</a>). Essential for systemic glucose homeostasis, mediates insulin-induced signals for endosome/actin remodeling in the course of GLUT4 translocation/glucose uptake activation (By similarity). Supports microtubule-based endosome- to-trans-Golgi network cargo transport, through association with SPAG9 and RABEPK (By similarity). Mediates EGFR trafficking to the nucleus (PubMed:<a href="http://www.uniprot.org/citations/17909029" target="\_blank">17909029</a>).

### Cellular Location

Endosome membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9Z1T6}. Early endosome membrane; Peripheral membrane protein. Cytoplasmic vesicle, phagosome membrane; Peripheral membrane protein. Late endosome membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9Z1T6}. Note=Mainly associated with membranes of the late endocytic pathway.

## Anti-PI3K Type III (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-PI3K Type III (RABBIT) Antibody - Images**

#### **Anti-PI3K Type III (RABBIT) Antibody - Background**

Phosphatidylinositol 3-phosphate 5-kinase type III is a member of PI3/PI4-kinase family, PI4KII alpha is widely expressed with the highest amount of expression in the kidney, brain, heart, skeletal muscle, and placenta. The protein encoded by this gene regulates endosomal sorting, mutations can cause fleck corneal dystrophy. Anti-PI3K type III antibody is ideal for investigators interested in Kinase and Phosphatase Antibodies.