

Phospho-PI3KC3(S282) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP3368a

Product Information

ApplicationWB, DB, EPrimary AccessionQ8NEB9

Other Accession Q6AZN6, Q88763, Q6PF93

Reactivity Human

Predicted Mouse, Rat, Xenopus

Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Clone Names RB11900
Calculated MW 101549

Additional Information

Gene ID 5289

Other Names Phosphatidylinositol 3-kinase catalytic subunit type 3, PI3-kinase type 3, PI3K

type 3, PtdIns-3-kinase type 3, Phosphatidylinositol 3-kinase p100 subunit,

Phosphoinositide-3-kinase class 3, hVps34, PIK3C3, VPS34

Target/Specificity This PI3KC3 Antibody is generated from rabbits immunized with a KLH

conjugated synthetic phosphopeptide corresponding to amino acid residues

surrounding S282 of human PI3KC3.

Dilution WB~~1:1000 DB~~1:500 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 Phospho-PI3KC3(S282) Antibody is for research use only and not for use in

diagnostic or therapeutic procedures.

Protein Information

Name PIK3C3 (<u>HGNC:8974</u>)

Synonyms VPS34 {ECO:0000305}

Function

Catalytic subunit of the PI3K complex that mediates formation of phosphatidylinositol 3-phosphate; different complex forms are believed to play a role in multiple membrane trafficking pathways: PI3KC3-C1 is involved in initiation of autophagosomes and PI3KC3-C2 in maturation of autophagosomes and endocytosis (PubMed:14617358, PubMed:33637724, PubMed:7628435). As part of PI3KC3-C1, promotes endoplasmic reticulum membrane curvature formation prior to vesicle budding (PubMed:32690950). Involved in regulation of degradative endocytic trafficking and required for the abscission step in cytokinesis, probably in the context of PI3KC3-C2 (PubMed:20208530, PubMed:20643123). Involved in the transport of lysosomal enzyme precursors to lysosomes (By similarity). Required for transport from early to late endosomes (By similarity).

Cellular Location

Midbody. Late endosome. Cytoplasmic vesicle, autophagosome. Note=As component of the PI3K complex I localized to pre-autophagosome structures. As component of the PI3K complex II localized predominantly to endosomes (PubMed:14617358). Also localizes to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme (By similarity) {ECO:0000250|UniProtKB:Q6PF93, ECO:0000305|PubMed:14617358}

Tissue Location

Ubiquitously expressed, with a highest expression in skeletal muscle.

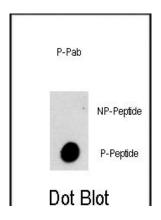
Background

PI3KC3 is a catalytic subunit of the PI3K complex involved in the transport of lysosomal enzyme precursors to lysosomes. This enzyme acts catalytically to convert 1-phosphatidyl-1D-myo-inositol to 1-phosphatidyl-1D-myo-inositol 3-phosphate. Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole). The regulation of the Beclin 1-PI3KC3 complex lipid kinase activity is a critical element in the autophagy signaling pathway.

References

Vergne, I., et al., J. Exp. Med. 198(4):653-659 (2003). Volinia, S., et al., EMBO J. 14(14):3339-3348 (1995).

Images



Dot blot analysis of Phospho-PI3KC3-S282 Antibody (Cat.#AP3368a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Citations

• HOTAIR/miR-326/FUT6 axis facilitates colorectal cancer progression through regulating fucosylation of CD44 via PI3K/AKT/mTOR pathway.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.