

**PI3KC3 Antibody (S676)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP1851i**

### Specification

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#### PI3KC3 Antibody (S676) - Product Information

Application	IHC-P,E
Primary Accession	<a href="#">Q8NEB9</a>
Other Accession	<a href="#">Q6AZN6</a> , <a href="#">O88763</a> , <a href="#">Q5D891</a> , <a href="#">Q6PF93</a>
Reactivity	Human
Predicted	Mouse, Pig, Rat, Xenopus
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	101549
Antigen Region	661-691

#### PI3KC3 Antibody (S676) - 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 peptide between 661~691 amino acids surrounding S676 of human PI3KC3.

#### Dilution

IHC-P~~1:10~50

#### 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

PI3KC3 Antibody (S676) is for research use only and not for use in diagnostic or therapeutic procedures.

#### PI3KC3 Antibody (S676) - Protein Information

Name PIK3C3 ([HGNC:8974](#))

**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](#)). Localizes also 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.

**PI3KC3 Antibody (S676) - 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](#)

**PI3KC3 Antibody (S676) - Images**

Formalin-fixed and paraffin-embedded human skeletal muscle tissue reacted with PI3KC3 Antibody (S676), 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.

### **PI3KC3 Antibody (S676) - 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.

### **PI3KC3 Antibody (S676) - References**

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