

# PIK3C3 Antibody

Catalog # ASC11822

# Specification

# PIK3C3 Antibody - Product Information

Application Primary Accession Other Accession Reactivity Host Clonality Isotype Calculated MW

WB, E <u>O8NEB9</u> <u>NP\_002638</u>, <u>34761064</u> Human, Mouse, Rat Rabbit Polyclonal IgG Predicted: 91, 98 kDa

Application Notes

Observed: 98 kDa KDa PIK3C3 antibody can be used for detection of PIK3C3 by Western blot at 1 - 2 μg/ml.

# PIK3C3 Antibody - Additional Information

Gene ID 5289 Target/Specificity PIK3C3; PIK3C3 antibody is human, mouse and rat reactive.

**Reconstitution & Storage** PIK3C3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

# **Precautions** PIK3C3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

# PIK3C3 Antibody - 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:<a href="http://www.uniprot.org/citations/14617358" target="\_blank">14617358</a>, PubMed:<a href="http://www.uniprot.org/citations/33637724" target="\_blank">33637724</a>, PubMed:<a href="http://www.uniprot.org/citations/7628435" target="\_blank">7628435</a>). As part of PI3KC3-C1, promotes endoplasmic reticulum membrane curvature formation prior to vesicle budding (PubMed:<a href="http://www.uniprot.org/citations/7628435" target="\_blank">7628435</a>). As part of PI3KC3-C1, promotes endoplasmic reticulum membrane curvature formation prior to vesicle budding (PubMed:<a href="http://www.uniprot.org/citations/32690950" target="\_blank">32690950</a>). Involved in regulation of degradative endocytic trafficking and required for the abscission step in cytokinesis,

probably in the context of PI3KC3-C2 (PubMed:<a



href="http://www.uniprot.org/citations/20208530" target="\_blank">20208530</a>, PubMed:<a href="http://www.uniprot.org/citations/20643123" target="\_blank">20643123</a>). 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** 

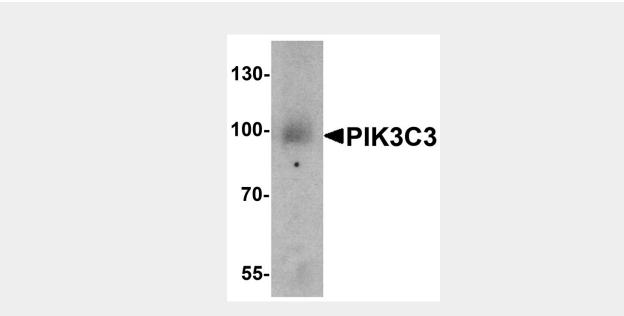
Ubiquitously expressed, with a highest expression in skeletal muscle.

# **PIK3C3 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

#### PIK3C3 Antibody - Images



Western blot analysis of PIK3C3 in mouse small intestine tissue lysate with PIK3C3 antibody at 1  $\mu\text{g/ml}.$ 

# PIK3C3 Antibody - Background

PI 3-kinase p100 (phosphoinositide-3-kinase p100 subunit), also known as hVps34 or PIK3C3 (phosphoinositide-3-kinase class III), is a member of the PI3/PI4-kinase family (1). It is a catalytic



subunit of the PI3K complex that mediates formation of phosphatidylinositol 3-phosphate and ubiquitously expressed with a highest expression in skeletal muscle (1,2). PIK3C3 is involved in the endosome to lysosome transport and plays important roles in intracellular membrane trafficking and autophagy (3-5).

# PIK3C3 Antibody - References

Stopkova P, Saito T, Papolos DF, et al. Identification of PIK3C3 promoter variant associated with bipolar disorder and schizophrenia. Biol. Psychiatry 2004; 55:981-8.

Hal BS, Gabernet-Castello C, Voak A, et al. TbVps34, the trypanosome orthologue of Vps34, is required for Golgi complex segregation. J. Biol. Chem. 2006; 281:27600-12.

Backer JM. The regulation and function of class III PI3Ks: novel roles for Vps34. Biochem. J. 2008; 410:1-17.

Jaber N, Dou Z, Lin RZ, et al. Mammalian PIK3C3/VPS34: the key to autophagic processing in liver and heart. Autophagy 2012; 8:707-8.