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PIK3R4 Antibody
Catalog # ASC11846

Specification

PIK3R4 Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q99570
Other Accession	NP_055417, 23943912
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 149 kDa** **Observed: 140 kDa KDa**
Application Notes	**PIK3R4 antibody can be used for detection of PIK3R4 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

PIK3R4 Antibody - Additional Information

Gene ID **30849**

Target/Specificity
PIK3R4; PIK3R4 antibody is human, mouse and rat reactive.

Reconstitution & Storage
PIK3R4 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
PIK3R4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PIK3R4 Antibody - Protein Information

Name PIK3R4

Synonyms VPS15 {ECO:0000303|PubMed:23878393}

Function
Regulatory 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. Involved in regulation of degradative endocytic trafficking and cytokinesis, probably in the context of PI3KC3-C2 (PubMed:20643123).

Cellular Location

Late endosome. Cytoplasmic vesicle, autophagosome. Membrane; Lipid-anchor. Note=As component of the PI3K complex I localized to pre-autophagosome structures. As component of the PI3K complex II localized predominantly to endosomes. Localizes also to discrete punctae along the ciliary axoneme (By similarity) {ECO:0000250|UniProtKB:Q8VD65, ECO:0000305}

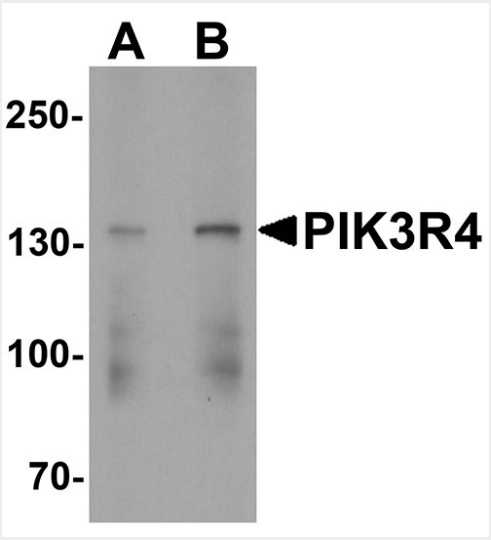
Tissue Location
Ubiquitously expressed.

PIK3R4 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 Cytomety
- Cell Culture

PIK3R4 Antibody - Images



Western blot analysis of PIK3R4 in human tonsil tissue lysate with PIK3R4 antibody at (A) 1 and (B) 2 µg/ml.

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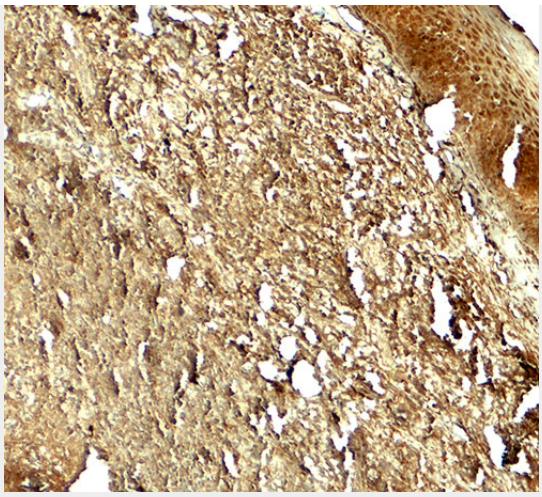
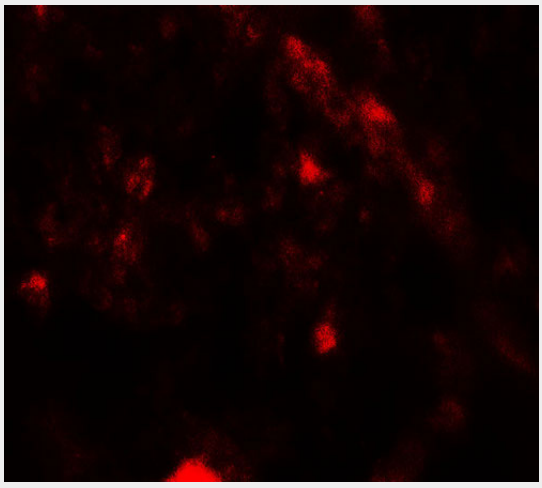


Immunohistochemistry of PIK3R4 in human tonsil tissue with PIK3R4 antibody at 5 µg/ml.



Immunofluorescence of PIK3R4 in human tonsil tissue with PIK3R4 antibody at 20 µg/ml.

PIK3R4 Antibody - Background

PIK3R4 (phosphoinositide-3-kinase regulatory subunit 4, also known as VPS15) is a 150kD adaptor protein that enhances the lipid kinase activity of PIK3 complexes and may be involved in regulating membrane trafficking late in the endocytic pathway and autophagy (1,2). PIK3R4 is ubiquitously expressed and contains 7 WD repeats, 3 HEAT repeats and 1 protein kinase domain (1). PIK3R4 is crucial for VPS34 function and is necessary for autophagosome formation in multicellular animals and reveal an important role of VPS15 in cellular protection against ubiquitin-positive protein aggregates (3-5).

PIK3R4 Antibody - References

Herman PK, Stack JH, and Emr SD. A genetic and structural analysis of the yeast Vps15 protein kinase: evidence for a direct role of Vps15p in vacuolar protein delivery. EMBO J. 1991; 10:4049-60.
Stasyk OV, van der Klei IJ, Bellu AR, et al. A Pichia pastoris VPS15 homologue is required in selective peroxisome autophagy. Curr. Genet. 1999; 36:262-9.
Kihara A, Noda T, Ishihara N, et al. Two distinct Vps34 phosphatidylinositol 3-kinase complexes function in autophagy and carboxypeptidase Y sorting in Saccharomyces cerevisiae. J. Cell Biol. 2001; 152:519-30.
Stack JH, DeWald DB, Takegawa K, et al. Vesicle-mediated protein transport: regulatory interactions between the Vps15 protein kinase and the Vps34 PtdIns 3-kinase essential for protein sorting to the vacuole in yeast. J. Cell Biol. 1995; 129:321-34.