

PI4KCA Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP8029a**Specification**

PI4KCA Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P42356](#)**PI4KCA Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 5297**Other Names**

Phosphatidylinositol 4-kinase alpha, PI4-kinase alpha, PI4K-alpha, PtdIns-4-kinase alpha, PI4KA, PIK4, PIK4CA

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8029a](/product/products/AP8029a) was selected from the N-term region of human PI4KCA. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PI4KCA Antibody (N-term) Blocking Peptide - Protein Information**Name** PI4KA**Synonyms** PIK4, PIK4CA**Function**

Acts on phosphatidylinositol (PtdIns) in the first committed step in the production of the second messenger inositol-1,4,5,- trisphosphate.

Cellular Location

Cytoplasm. Cell membrane Note=Localization to the plasma membrane is mediated by the PI4K complex and association with EFR3 (EFR3A or EFR3B), TTC7 (TTC7A or TTC7B) and HYCC (HYCC1 or HYCC2) (PubMed:23229899). Localization to the plasma membrane is regulated by TMEM150A (PubMed:25608530)

Tissue Location

Expressed ubiquitously. Highest levels in placenta and brain. Little or no expression in lung, liver, pancreas, testis or leukocytes.

PI4KCA Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

PI4KCA Antibody (N-term) Blocking Peptide - Images**PI4KCA Antibody (N-term) Blocking Peptide - Background**

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the γ phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. This gene encodes a phosphatidylinositol (PI) 4-kinase which catalyzes the first committed step in the biosynthesis of phosphatidylinositol 4,5-bisphosphate. The mammalian PI 4-kinases have been classified into two types, II and III, based on their molecular mass, and modulation by detergent and adenosine. Two transcript variants encoding different isoforms have been described for this gene. Variant 1 is alternatively spliced at the 5' end compared to transcript variant 2. However, it maintains the same reading frame and encodes an isoform 1 (97 kDa) which is truncated at the N-terminus compared to isoform 2 (230 kDa). Isoform 1 has enzymatic properties characteristic of type II PI 4-kinases. Variant 2 is full-length, and encodes the longer isoform 2 with a different N-terminus compared to isoform 1. Isoform 2 has enzymatic properties characteristic of type III PI 4-kinases.

PI4KCA Antibody (N-term) Blocking Peptide - References

Subrahmanyam, G., et al., Eur. J. Immunol. 33(1):46-52 (2003). Huang, C., et al., J. Biol. Chem. 277(23):20293-20300 (2002). Gehrmann, T., et al., Biochim. Biophys. Acta 1437(3):341-356 (1999). Gehrmann, T., et al., Eur. J. Biochem. 253(2):357-370 (1998). Wong, K., et al., J. Biol. Chem. 269(46):28878-28884 (1994).