

**PI4KCA Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP8029A**

**Specification**

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**PI4KCA Antibody (N-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">P42356</a>
Other Accession	<a href="#">O08662</a> , <a href="#">O02811</a> , <a href="#">E9Q3L2</a>
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	6-36

**PI4KCA Antibody (N-term) - 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**

This PI4KCA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 6-36 amino acids from the N-terminal region of human PI4KCA.

**Dilution**

WB~~1:1000  
IHC-P~~1:50~100

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**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**

PI4KCA Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**PI4KCA Antibody (N-term) - 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**

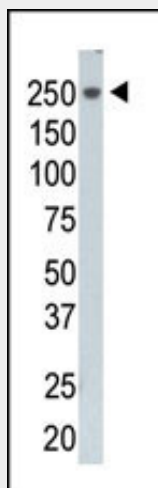
Expressed ubiquitously. Highest levels in placenta and brain. Little or no expression in lung, liver, pancreas, testis or leukocytes.

**PI4KCA Antibody (N-term) - Protocols**

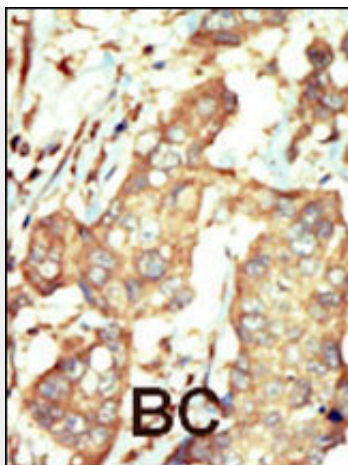
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

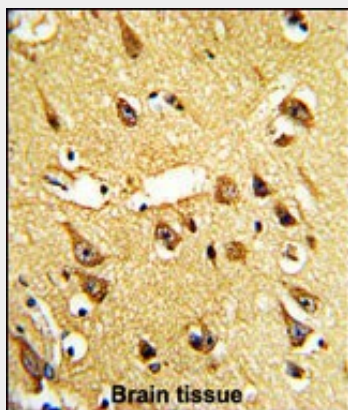
**PI4KCA Antibody (N-term) - Images**



The anti-PI4KCA Pab (Cat. #AP8029a) is used in Western blot to detect PI4KCA in human placenta tissue lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human brain tissue reacted with PI4KCA Antibody (N-term), 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.

#### **PI4KCA Antibody (N-term) - Background**

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the  $\gamma$  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) - 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).