

**Goat Anti-PIK3C2A Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1826a****Specification**

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**Goat Anti-PIK3C2A Antibody - Product Information**

Application	IHC
Primary Accession	<a href="#">O00443</a>
Other Accession	<a href="#">NP_002636</a> , <a href="#">5286</a> , <a href="#">18704 (mouse)</a>
Reactivity	Human
Predicted	Mouse, Dog
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	190680

**Goat Anti-PIK3C2A Antibody - Additional Information****Gene ID** 5286**Other Names**

Phosphatidylinositol 4-phosphate 3-kinase C2 domain-containing subunit alpha, PI3K-C2-alpha, PtdIns-3-kinase C2 subunit alpha, 2.7.1.154, Phosphoinositide 3-kinase-C2-alpha, PIK3C2A

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-PIK3C2A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-PIK3C2A Antibody - Protein Information****Name** PIK3C2A**Function**

Generates phosphatidylinositol 3-phosphate (PtdIns3P) and phosphatidylinositol 3,4-bisphosphate (PtdIns(3,4)P<sub>2</sub>) that act as second messengers. Has a role in several intracellular trafficking events. Functions in insulin signaling and secretion. Required for translocation of the glucose transporter SLC2A4/GLUT4 to the plasma membrane and glucose uptake in response to insulin-mediated RHOQ activation. Regulates insulin secretion through two different mechanisms:

involved in glucose-induced insulin secretion downstream of insulin receptor in a pathway that involves AKT1 activation and TBC1D4/AS160 phosphorylation, and participates in the late step of insulin granule exocytosis probably in insulin granule fusion. Synthesizes PtdIns3P in response to insulin signaling. Functions in clathrin-coated endocytic vesicle formation and distribution. Regulates dynamin-independent endocytosis, probably by recruiting EEA1 to internalizing vesicles. In neurosecretory cells synthesizes PtdIns3P on large dense core vesicles. Participates in calcium induced contraction of vascular smooth muscle by regulating myosin light chain (MLC) phosphorylation through a mechanism involving Rho kinase-dependent phosphorylation of the MLCP-regulatory subunit MYPT1. May play a role in the EGF signaling cascade. May be involved in mitosis and UV-induced damage response. Required for maintenance of normal renal structure and function by supporting normal podocyte function. Involved in the regulation of ciliogenesis and trafficking of ciliary components (PubMed:<a href="http://www.uniprot.org/citations/31034465" target="\_blank">31034465</a>).

#### **Cellular Location**

Cell membrane. Cytoplasmic vesicle, clathrin-coated vesicle. Nucleus Cytoplasm Golgi apparatus, trans-Golgi network. Note=Inserts preferentially into membranes containing PtdIns(4,5)P2 (PubMed:17038310). Associated with RNA-containing structures (PubMed:11606566)

#### **Tissue Location**

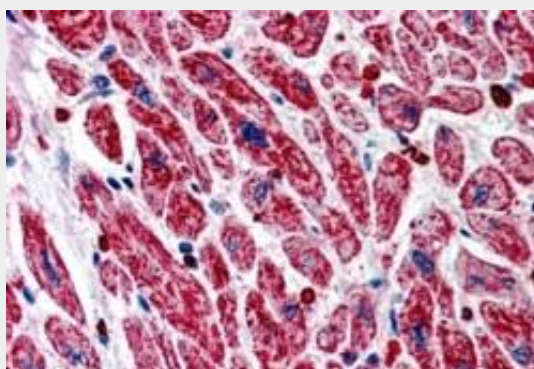
Expressed in columnar and transitional epithelia, mononuclear cells, smooth muscle cells, and endothelial cells lining capillaries and small venules (at protein level). Ubiquitously expressed, with highest levels in heart, placenta and ovary, and lowest levels in the kidney. Detected at low levels in islets of Langerhans from type 2 diabetes mellitus individuals

### **Goat Anti-PIK3C2A 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 Cytometry](#)
- [Cell Culture](#)

### **Goat Anti-PIK3C2A Antibody - Images**



AF1826a (5 µg/ml) staining of paraffin embedded Human Heart. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

### **Goat Anti-PIK3C2A Antibody - Background**

The protein encoded by this gene belongs to the phosphoinositide 3-kinase (PI3K) family. PI3-kinases play roles in signaling pathways involved in cell proliferation, oncogenic transformation, cell survival, cell migration, and intracellular protein trafficking. This protein contains a lipid kinase catalytic domain as well as a C-terminal C2 domain, a characteristic of class II PI3-kinases. C2 domains act as calcium-dependent phospholipid binding motifs that mediate translocation of proteins to membranes, and may also mediate protein-protein interactions. The PI3-kinase activity of this protein is not sensitive to nanomolar levels of the inhibitor wortmanin. This protein was shown to be able to be activated by insulin and may be involved in integrin-dependent signaling.

### **Goat Anti-PIK3C2A Antibody - References**

A Large-scale genetic association study of esophageal adenocarcinoma risk. Liu CY, et al. Carcinogenesis, 2010 Jul. PMID 20453000.  
Absence of hotspot mutations in exons 9 and 20 of the PIK3CA gene in human oral squamous cell carcinoma in the Greek population. Kostakis GC, et al. Oral Surg Oral Med Oral Pathol Oral Radiol Endod, 2010 May. PMID 20416519.  
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Pooled analysis of phosphatidylinositol 3-kinase pathway variants and risk of prostate cancer. Koutros S, et al. Cancer Res, 2010 Mar 15. PMID 20197460.  
Defining the human deubiquitinating enzyme interaction landscape. Sowa ME, et al. Cell, 2009 Jul 23. PMID 19615732.