

**PIK3R1 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1752a****Specification****PIK3R1 Antibody - Product Information**

Application	E, WB, IF, FC, IHC
Primary Accession	<a href="#">P27986</a>
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	83.6kDa KDa

**Description**

Phosphatidylinositol 3-kinase phosphorylates the inositol ring of phosphatidylinositol at the 3-prime position. The enzyme comprises a 110 kD catalytic subunit and a regulatory subunit of either 85, 55, or 50 kD. This gene encodes the 85 kD regulatory subunit. Phosphatidylinositol 3-kinase plays an important role in the metabolic actions of insulin, and a mutation in this gene has been associated with insulin resistance. Alternative splicing of this gene results in four transcript variants encoding different isoforms.

**Immunogen**

Purified recombinant fragment of human PIK3R1 (AA: 159-388) expressed in E. Coli.

**Formulation**

Purified antibody in PBS with 0.05% sodium azide

**PIK3R1 Antibody - Additional Information**

**Gene ID** 5295

**Other Names**

Phosphatidylinositol 3-kinase regulatory subunit alpha, PI3-kinase regulatory subunit alpha, PI3K regulatory subunit alpha, PtdIns-3-kinase regulatory subunit alpha, Phosphatidylinositol 3-kinase 85 kDa regulatory subunit alpha, PI3-kinase subunit p85-alpha, PtdIns-3-kinase regulatory subunit p85-alpha, PIK3R1, GRB1

**Dilution**

E~~1/10000  
WB~~1/500 - 1/2000  
IF~~1/100  
FC~~1/200 - 1/400  
IHC~~1/200 - 1/1000

**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**

PIK3R1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## **PIK3R1 Antibody - Protein Information**

**Name** PIK3R1

**Synonyms** GRB1

### **Function**

Binds to activated (phosphorylated) protein-Tyr kinases, through its SH2 domain, and acts as an adapter, mediating the association of the p110 catalytic unit to the plasma membrane. Necessary for the insulin-stimulated increase in glucose uptake and glycogen synthesis in insulin-sensitive tissues. Plays an important role in signaling in response to FGFR1, FGFR2, FGFR3, FGFR4, KITLG/SCF, KIT, PDGFRA and PDGFRB. Likewise, plays a role in ITGB2 signaling (PubMed:<a href="http://www.uniprot.org/citations/17626883" target="\_blank">17626883</a>, PubMed:<a href="http://www.uniprot.org/citations/19805105" target="\_blank">19805105</a>, PubMed:<a href="http://www.uniprot.org/citations/7518429" target="\_blank">7518429</a>). Modulates the cellular response to ER stress by promoting nuclear translocation of XBP1 isoform 2 in a ER stress- and/or insulin-dependent manner during metabolic overloading in the liver and hence plays a role in glucose tolerance improvement (PubMed:<a href="http://www.uniprot.org/citations/20348923" target="\_blank">20348923</a>).

### **Tissue Location**

Isoform 2 is expressed in skeletal muscle and brain, and at lower levels in kidney and cardiac muscle. Isoform 2 and isoform 4 are present in skeletal muscle (at protein level)

## **PIK3R1 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](#)

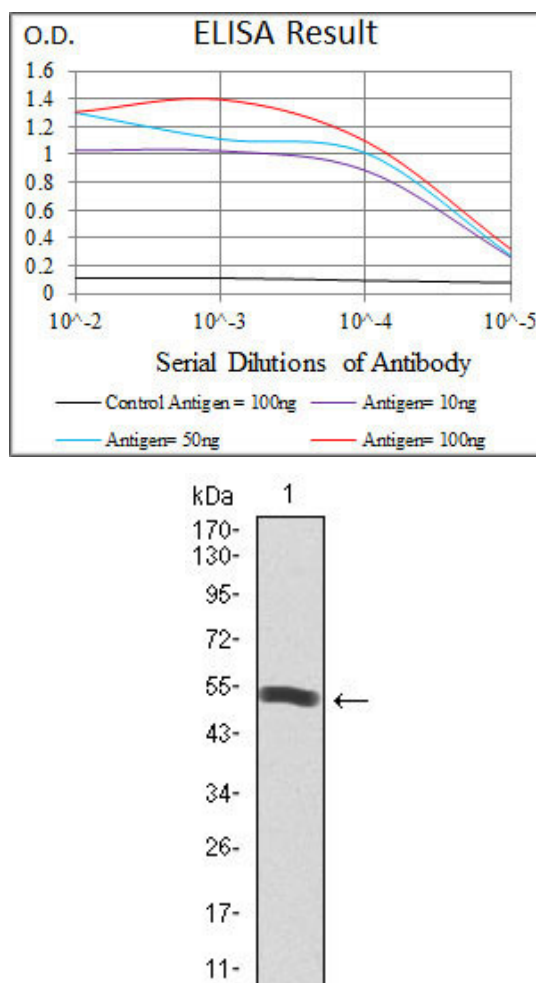


Figure 1: Western blot analysis using PIK3R1 mAb against human PIK3R1 recombinant protein. (Expected MW is 53.4 kDa)

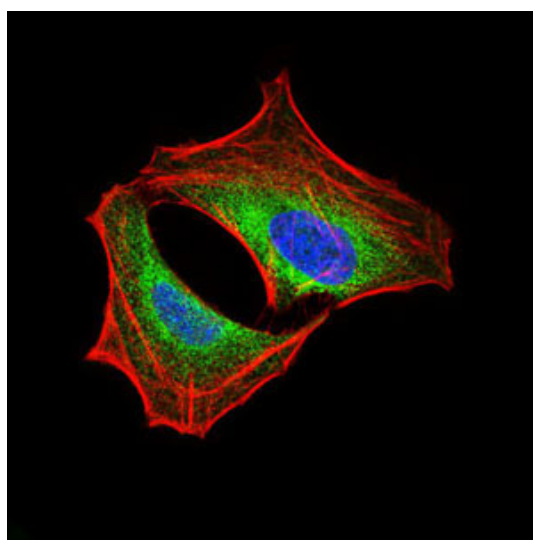


Figure 2: Immunofluorescence analysis of HeLa cells using PIK3R1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

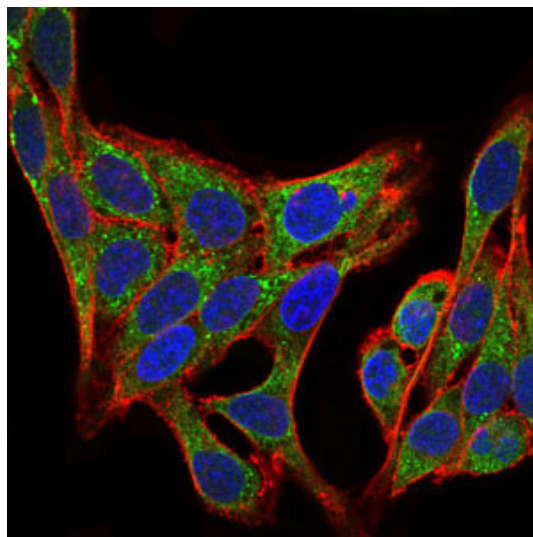


Figure 3: Immunofluorescence analysis of HepG2 cells using PIK3R1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

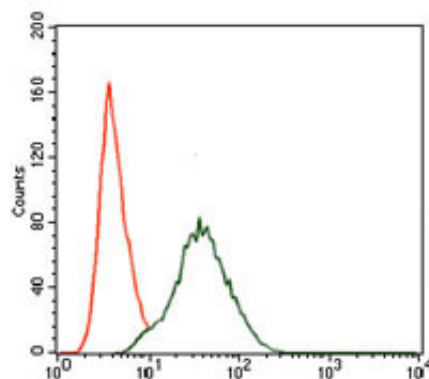


Figure 4: Flow cytometric analysis of NIH3T3 cells using PIK3R1 mouse mAb (green) and negative control (red).

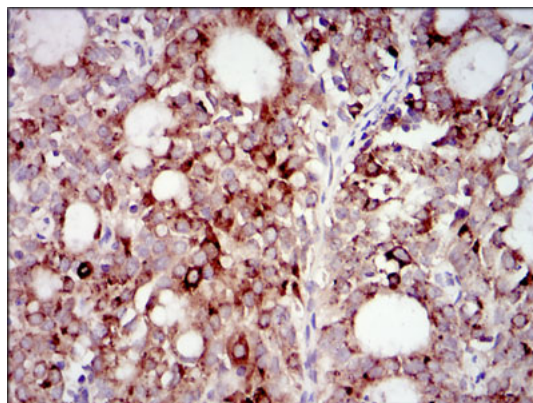


Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using PIK3R1 mouse mAb with DAB staining.

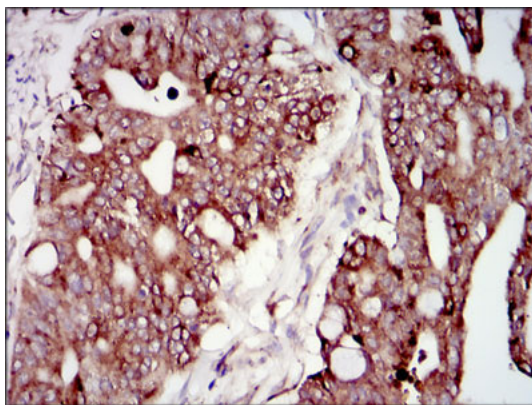


Figure 6: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using PIK3R1 mouse mAb with DAB staining.

#### **PIK3R1 Antibody - References**

1. Cancer Epidemiol Biomarkers Prev. 2011 May;20(5):923-33.
2. Cancer Res. 2010 Jul 1;70(13):5305-15.