

### PIK3R1 Antibody (Y580)

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP8023f

### Specification

# PIK3R1 Antibody (Y580) - Product Information

Application Primary Accession Other Accession Reactivity Predicted Host Clonality Isotype Antigen Region WB, IHC-P,E <u>P27986</u> <u>Q63787</u>, <u>P26450</u>, <u>P23727</u>, <u>Q8UUU2</u> Human Xenopus, Bovine, Mouse, Rat Rabbit Polyclonal Rabbit IgG 558-587

## PIK3R1 Antibody (Y580) - 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, PtdIns-3-kinase regulatory subunit p85-alpha, PIK3R1, GRB1

#### Target/Specificity

This PIK3R1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 558-587 amino acids from human PIK3R1.

**Dilution** WB~~1:1000 IHC-P~~1:10~50

#### Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

#### 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

PIK3R1 Antibody (Y580) is for research use only and not for use in diagnostic or therapeutic procedures.

# PIK3R1 Antibody (Y580) - 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:<u>17626883</u>, PubMed:<u>19805105</u>, PubMed:<u>7518429</u>). 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:<u>20348923</u>).

### **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 (Y580) - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

### PIK3R1 Antibody (Y580) - Images



Western blot analysis of PIK3R1 (arrow) using rabbit polyclonal PIK3R1 Antibody (Y580) (Cat.#AP8023f). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PIK3R1 gene (Lane 2) (Origene Technologies).





Formalin-fixed and paraffin-embedded human skeletal muscle tissue reacted with PIK3R1-pY580, 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.

# PIK3R1 Antibody (Y580) - Background

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.

## PIK3R1 Antibody (Y580) - References

Kobayashi, H., et al., J. Biol. Chem. 279(8):6371-6379 (2004). Liu, H., et al., J. Cell Biol. 164(4):603-612 (2004). Sun, M., et al., J. Biol. Chem. 278(44):42992-43000 (2003). Khan, N.A., et al., J. Neurovirol. 9(6):584-593 (2003). Lee, H.Y., et al., J. Biol. Chem. 278(26):23630-23638 (2003).