

**PIK3R1 Antibody (Y556) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP8023e****Specification****PIK3R1 Antibody (Y556) Blocking Peptide -  
Product Information**Primary Accession [P27986](#)**PIK3R1 Antibody (Y556) Blocking Peptide -  
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

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP8023e](/product/products/AP8023e) was selected from the Y556 region of human PIK3R1. 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.

**PIK3R1 Antibody (Y556) Blocking Peptide -  
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 (Y556) Blocking Peptide -  
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).

**PIK3R1 Antibody (Y556) Blocking Peptide -  
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 (Y556) Blocking Peptide -  
Protocols**

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

- [Blocking Peptides](#)