

**Phospho-PIK3R1(Y556) Antibody Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP3465a****Specification**

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**Phospho-PIK3R1(Y556) Antibody Blocking peptide - Product Information**Primary Accession [P27986](#)**Phospho-PIK3R1(Y556) Antibody 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 [AP3465a](/products/AP3465a) was selected from the region of human Phospho-PIK3R1-Y556. 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.

**Phospho-PIK3R1(Y556) Antibody 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:[17626883](http://www.uniprot.org/citations/17626883), PubMed:[19805105](http://www.uniprot.org/citations/19805105), PubMed:

[7518429](http://www.uniprot.org/citations/7518429)). 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: [20348923](http://www.uniprot.org/citations/20348923)).

#### **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)

#### **Phospho-PIK3R1(Y556) Antibody Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

#### **Phospho-PIK3R1(Y556) Antibody Blocking peptide - Images**

#### **Phospho-PIK3R1(Y556) Antibody 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 antibody is directed against an epitope in the 85 kD regulatory subunit. Phosphatidylinositol 3-kinase plays an important role in the metabolic actions of insulin, and a mutation in the gene has been associated with insulin resistance.

#### **Phospho-PIK3R1(Y556) Antibody 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).