

PI3KR1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP8023a**Specification**

PI3KR1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P27986](#)**PI3KR1 Antibody (N-term) 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 [AP8023a](/product/products/AP8023a) was selected from the N-term region of human PI3KR1. 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.

PI3KR1 Antibody (N-term) 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: [19805105](http://www.uniprot.org/citations/19805105)).

[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)

PI3KR1 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

PI3KR1 Antibody (N-term) Blocking Peptide - Images**PI3KR1 Antibody (N-term) Blocking Peptide - Background**

PI3KR1 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. It is necessary for the insulin-stimulated increase in glucose uptake and glycogen synthesis in insulin-sensitive tissues. It is a component of a heterodimer composed of P110 (catalytic) and P85 (regulatory) subunits. PI3KR1 is proposed to interact with phosphorylated TOM1L1. Defects in PI3KR1 are a cause of severe insulin resistance. The protein contains 1 Rho-GAP domain, 2 SH2 domains, and 1 SH3 domain.

PI3KR1 Antibody (N-term) Blocking Peptide - References

Baynes, K.C., et al., Diabetologia 43(3):321-331 (2000). Hansen, T., et al., Diabetes 46(3):494-501 (1997). Musacchio, A., et al., Proc. Natl. Acad. Sci. U.S.A. 93(25):14373-14378 (1996). Nolte, R.T., et al., Nat. Struct. Biol. 3(4):364-374 (1996). Liang, J., et al., J. Mol. Biol. 257(3):632-643 (1996).