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PI3KR1 Blocking Peptide (N-term L11)

Synthetic peptide
Catalog # BP8023d

Specification

PI3KR1 Blocking Peptide (N-term L11) - Product Information

Primary Accession	P27986
Other Accession	Q63787, P26450, P23727

PI3KR1 Blocking Peptide (N-term L11) - 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 is selected from aa 11-25 of HUMAN PIK3R1

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 Blocking Peptide (N-term L11) - Protein Information

Name PIK3R1

PI3KR1 Blocking Peptide (N-term L11) - 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.

PI3KR1 Blocking Peptide (N-term L11) - 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).

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, PubMed:19805105, PubMed: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).

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 Blocking Peptide (N-term L11) - Protocols

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

- Blocking Peptides