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Phospho-IRS1(Y896) Antibody Blocking peptide

Synthetic peptide
Catalog # BP3555a

Specification

Phospho-IRS1(Y896) Antibody Blocking peptide - Product Information

Primary Accession P35568

Phospho-IRS1(Y896) Antibody Blocking peptide - Additional Information

Gene ID 3667

Other Names
Insulin receptor substrate 1, IRS-1, IRS1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3555a was selected from the region of human Phospho-IRS1-pY896. 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-IRS1(Y896) Antibody Blocking peptide - Protein Information

Name IRS1

Function
Signaling adapter protein that participates in the signal transduction from two prominent receptor tyrosine kinases, insulin receptor/INSR and insulin-like growth factor I receptor/IGF1R (PubMed:7541045, PubMed:33991522, PubMed:38625937). Plays therefore an important role in development, growth, glucose homeostasis as well as lipid metabolism (PubMed:19639489). Upon phosphorylation by the insulin receptor, functions as a signaling scaffold that propagates insulin action through binding to SH2 domain-containing proteins including the p85 regulatory subunit of PI3K, NCK1, NCK2, GRB2 or SHP2 (PubMed:11171109, PubMed:8265614). Recruitment of

GRB2 leads to the activation of the guanine nucleotide exchange factor SOS1 which in turn triggers the Ras/Raf/MEK/MAPK signaling cascade (By similarity). Activation of the PI3K/AKT pathway is responsible for most of insulin metabolic effects in the cell, and the Ras/Raf/MEK/MAPK is involved in the regulation of gene expression and in cooperation with the PI3K pathway regulates cell growth and differentiation. Acts a positive regulator of the Wnt/beta-catenin signaling pathway through suppression of DVL2 autophagy-mediated degradation leading to cell proliferation (PubMed:24616100).

Cellular Location
Cytoplasm. Nucleus. Note=Nuclear or cytoplasmic localization of IRS1 correlates with the transition from proliferation to chondrogenic differentiation.

Phospho-IRS1(Y896) Antibody Blocking peptide - Protocols

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

- Blocking Peptides

Phospho-IRS1(Y896) Antibody Blocking peptide - Images

Phospho-IRS1(Y896) Antibody Blocking peptide - Background

IRS1 may mediate the control of various cellular processes by insulin. When phosphorylated by the insulin receptor it binds specifically to various cellular proteins containing SH2 domains such as phosphatidylinositol 3-kinase p85 subunit or GRB2. It activates phosphatidylinositol 3-kinase when bound to the regulatory p85 subunit.

Phospho-IRS1(Y896) Antibody Blocking peptide - References

Kawakami,A., Circulation 118 (7), 731-742 (2008)Yi,Z., Anal. Chem. 77 (17), 5693-5699 (2005)