

Phospho-IRS2(Y978) Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3596a

Specification

Phospho-IRS2(Y978) Antibody - Product Information

Application	DB,E
Primary Accession	O9Y4H2
Other Accession	P81122
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	137334

Phospho-IRS2(Y978) Antibody - Additional Information

Gene ID 8660

Other Names

Insulin receptor substrate 2, IRS-2, IRS2

Target/Specificity

This IRS2 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y978 of human IRS2.

Dilution

DB~~1:500

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho-IRS2(Y978) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-IRS2(Y978) Antibody - Protein Information

Name IRS2

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:[25879670](#)). Plays therefore an important role in development, growth, glucose homeostasis as well as lipid metabolism (PubMed:[24616100](#)). 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:[15316008](#), PubMed:[19109239](#)). 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](#)). Plays a role in cell cycle progression by promoting a robust spindle assembly checkpoint (SAC) during M-phase (PubMed:[32554797](#)). In macrophages, IL4-induced tyrosine phosphorylation of IRS2 leads to the recruitment and activation of phosphoinositide 3-kinase (PI3K) (PubMed:[19109239](#)).

Cellular Location

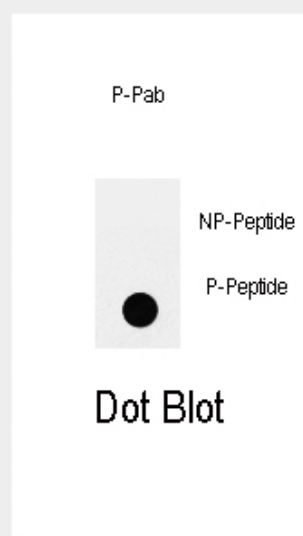
Cytoplasm, cytosol {ECO:0000250|UniProtKB:P81122}

Phospho-IRS2(Y978) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho-IRS2(Y978) Antibody - Images



Dot blot analysis of anti-Phospho-IRS2-pY978 Antibody (Cat.#AP3596a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Phospho-IRS2(Y978) Antibody - Background

Insulin receptor substrate 2, a cytoplasmic signaling molecule that mediates effects of insulin, insulin-like growth factor 1, and other cytokines by acting as a molecular adaptor between diverse receptor tyrosine kinases and downstream effectors. This protein is phosphorylated by the insulin receptor tyrosine kinase upon receptor stimulation, as well as by an interleukin 4 receptor-associated kinase in response to IL4 treatment.

Phospho-IRS2(Y978) Antibody - References

Hagg,D.A., Int. J. Mol. Med. 21 (6), 697-704 (2008)
Platanias,L.C., J. Biol. Chem. 271 (1), 278-282 (1996)
Sun,X.J., Nature 377 (6545), 173-177 (1995)