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Phospho-IRS2(Y978) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3596a

Product Information

Application	WB, DB, E
Primary Accession	Q9Y4H2
Other Accession	P81122
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15626
Calculated MW	137334

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	WB~~1:1000 DB~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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.

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}

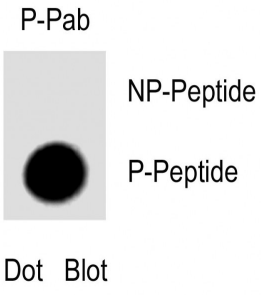
Background

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.

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)

Images



Dot blot analysis of Phospho-IRS2(Y978) Antibody Phospho-specific Pab (Cat. AP3596a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antobodies working concentration was 0. 5ug per ml.