

IRS-1 (Phospho Ser318) Rabbit pAb

CatalogNo: YP1368

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse

Applications

- WB, IHC

MW

- 170kD (Observed)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-2000

IHC 1:50-300

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized phospho peptide around human IRS-1 (Ser318)

Specificity This antibody detects endogenous levels of Human Mouse IRS-1 (phospho-Ser318)

Target Information

Gene name IRS1

Protein Name IRS-1 (Ser318)

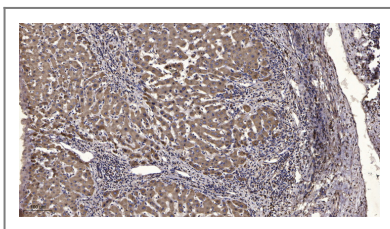
Organism	Gene ID	UniProt ID
Human	3667 ;	P35568 ;
Mouse	16367 ;	P35569 ;
Rat	25467 ;	P35570 ;

Cellular Localization nucleus ,cytoplasm ,cytosol ,plasma membrane ,insulin receptor complex ,caveola ,intracellular membrane-bounded organelle ,

Tissue specificity Epithelium ,Eye ,Skeletal muscle ,

Function Disease:Polymorphisms in IRS1 may be involved in the etiology of non-insulin-dependent diabetes mellitus (NIDDM) [MIM:125853]. ,Function:May mediate the control of various cellular processes by insulin. When phosphorylated by the insulin receptor binds specifically to various cellular proteins containing SH2 domains such as phosphatidylinositol 3-kinase p85 subunit or GRB2. Activates phosphatidylinositol 3-kinase when bound to the regulatory p85 subunit. ,polymorphism:The Arg-971 polymorphism impairs the ability of insulin to stimulate glucose transport , glucose transporter translocation , and glycogen synthesis by affecting the PI3K/AKT1/GSK3 signaling pathway. The polymorphism at Arg-971 may contribute to the in vivo insulin resistance observed in carriers of this variant. Arg-971 could contribute to the risk for atherosclerotic cardiovascular diseases associated with non-insulin-dependent diabetes mellitus (NIDDM) by producing a cluster of insulin resistance-related metabolic abnormalities. In insulin-stimulated human endothelial cells from carriers of the Arg-971 polymorphism , genetic impairment of the IRS1/PI3K/PDPK1/AKT1 insulin signaling cascade results in impaired insulin-stimulated nitric oxide (NO) release and suggested that this may be a mechanism through which the Arg-971 polymorphism contributes to the genetic predisposition to develop endothelial dysfunction and cardiovascular disease. The Arg-971 polymorphism not only reduces phosphorylation of the substrate but allows IRS1 to act as an inhibitor of PI3K , producing global insulin resistance. ,PTM:Phosphorylation of Tyr-896 is required for GRB2-binding. ,PTM:Serine phosphorylation of IRS1 is a mechanism for insulin resistance. Ser-312 phosphorylation inhibits insulin action through disruption of IRS1 interaction with the insulin receptor. ,similarity:Contains 1 IRS-type PTB domain. ,similarity:Contains 1 PH domain. ,subunit:Interacts with the NPXY motif of tyrosine-phosphorylated IGF1R and INSR via the PTB domain. Binds to phosphatidylinositol 3-kinase p85 subunit via the phosphorylated YXXM motifs. Binds ROCK1. Binds to UBTF and PIK3CA in nuclear extracts (By similarity) . Interacts with SOCS7.

Validation Data



Immunohistochemical analysis of paraffin-embedded human liver cancer. 1, Antibody was diluted at 1:200 (4°C overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200 (room temperature, 45min).

| Contact information

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