IRS-1 (Phospho Ser307) Rabbit pAb

CatalogNo: YP0147

Key Features

Host Species	Reactivity	Applications
• Rabbit	• Human,Mouse,Rat	• WB,IHC,IF,ELISA

MW	Isotype
• 170kD (Observed)	• 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 1:500-1:2000
IHC 1:100-1:300
IF 1:200-1:1000
ELISA 1:10000
Not yet tested in other applications.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human IRS-1 around the phosphorylation site of Ser307. AA range:274-323

Specificity	Phospho-IRS-1 (S307) Polyclonal Antibody detects endogenous levels of IRS-1 protein only when phosphorylated at S307.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):TEsIT

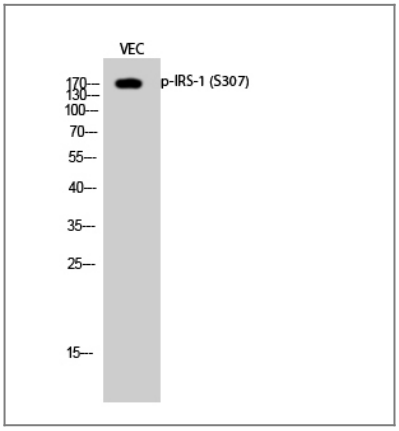
Target Information

Gene name	IRS1
Protein Name	Insulin receptor substrate 1

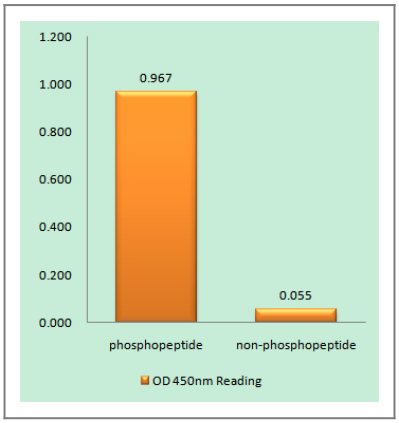
Organism	Gene ID	UniProt ID
Human	3667;	P35568;
Mouse	16367;	P35569;
Rat	25467;	P35570;

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. ,

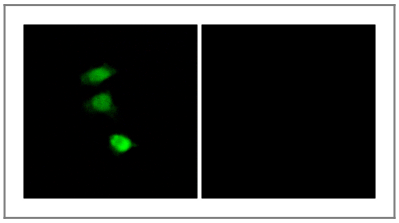
Validation Data



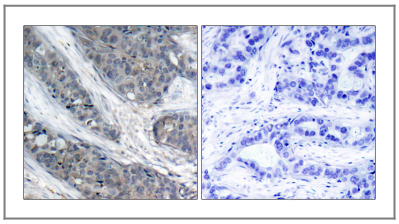
Western Blot analysis of VEC cells using Phospho-IRS-1 (S307) Polyclonal Antibody diluted at 1:1000



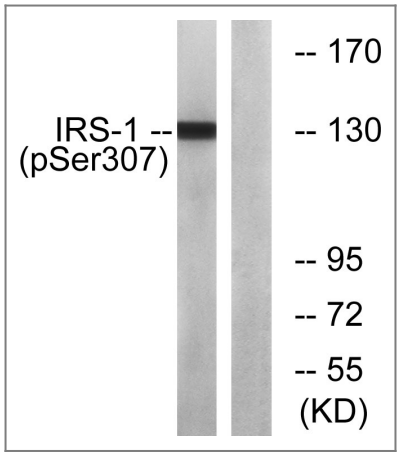
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using IRS-1 (Phospho-Ser307) Antibody



Immunofluorescence analysis of COS7 cells, using IRS-1 (Phospho-Ser307) Antibody. The picture on the right is blocked with the phospho peptide.



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using IRS-1 (Phospho-Ser307) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from K562 cells, using IRS-1 (Phospho-Ser307) Antibody. The lane on the right is blocked with the phospho peptide.

Contact information

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Please scan the QR code to access additional product information:
IRS-1 (Phospho Ser307) Rabbit pAb

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