Summary

Production Name	IRS-1 Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IHC,IF,ELISA
Reactivity	Human,Mouse,Rat,Pig

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	IRS1
Alternative Names	IRS1; Insulin receptor substrate 1; IRS-1
Gene ID	3667.0
SwissProt ID	P35568.The antiserum was produced against synthesized peptide derived from human IRS-1. AA range:603-652

Application

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Dilution Ratio	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:20000. Not yet tested in other applications.
Molecular Weight	170kD

Background

This gene encodes a protein which is phosphorylated by insulin receptor tyrosine kinase. Mutations in this gene are associated with type II diabetes and susceptibility to insulin resistance. [provided by RefSeq, Nov 2009],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.,
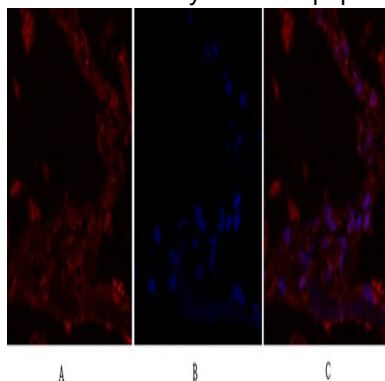
Research Area

Neurotrophin;Insulin_Receptor;Adipocytokine;Type II diabetes mellitus;Aldosterone-regulated sodium reabsorption;
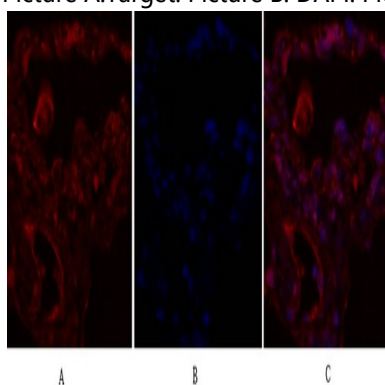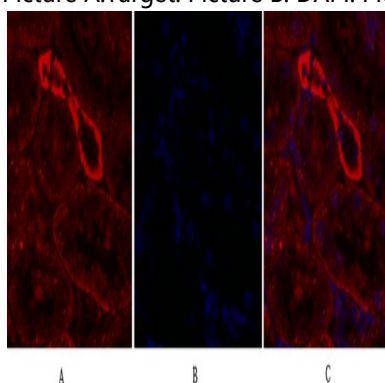
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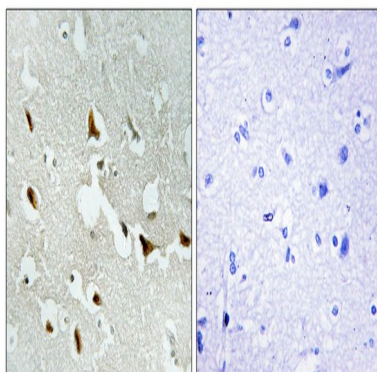
Immunohistochemistry analysis of paraffin-embedded human brain tissue, using IRS-1 Antibody. The picture on the right is blocked with the synthesized peptide.

Immunofluorescence analysis of human-lung tissue. 1,IRS-1 Polyclonal Antibody（red） was diluted at 1:200（4℃,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B
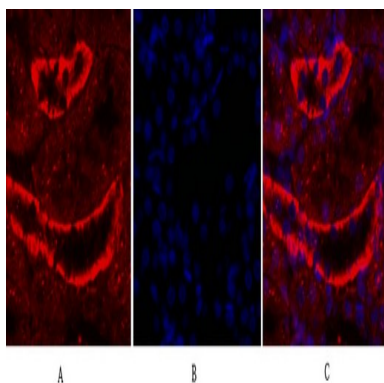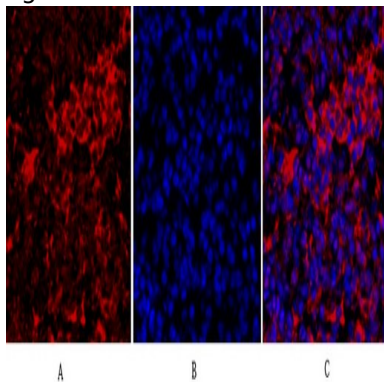

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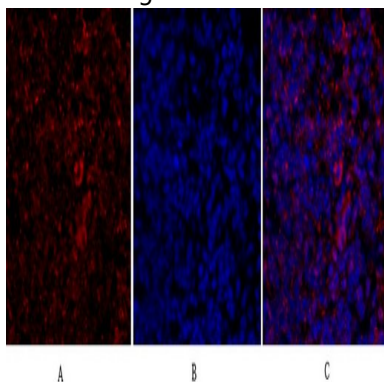

Immunofluorescence analysis of rat-kidney tissue. 1,IRS-1 Polyclonal Antibody（red） was diluted at 1:200（4℃,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

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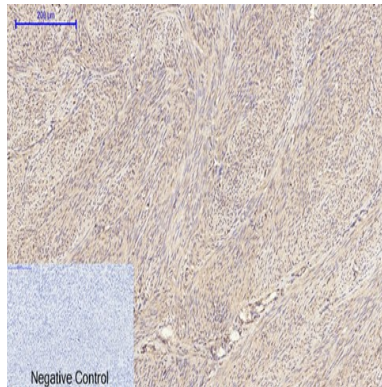
Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

Immunofluorescence analysis of mouse-lung tissue. 1,IRS-1 Polyclonal Antibody（red） was diluted at 1:200（4°C,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

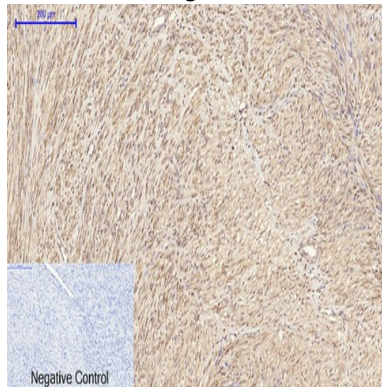Immunofluorescence analysis of mouse-lung tissue. 1,IRS-1 Polyclonal Antibody（red） was diluted at 1:200（4°C,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

Immunohistochemical analysis of paraffin-embedded Human-uterus tissue. 1,IRS-1 Polyclonal Antibody was diluted at 1:200（4℃,overnight）. 2, Sodium citrate pH 6.0 was used for antibody retrieval（>98℃,20min）. 3,Secondary antibody was diluted at 1:200（room tempeRature, 30min）. Negative control was used by secondary antibody only.

Immunohistochemical analysis of paraffin-embedded Human-uterus-cancer tissue. 1,IRS-1 Polyclonal Antibody was diluted at 1:200（4℃,overnight）. 2, Sodium citrate pH 6.0 was used for antibody retrieval（>98℃,20min）. 3,Secondary antibody was diluted at 1:200（room tempeRature, 30min）. Negative control was used by secondary antibody only.

Note
For research use only.