

## Rabbit Anti-IRS-4 antibody

SL0187R

**Product Name** IRS-4

**Chinese Name** 胰岛素受体底物-4 抗体

**Alias** IRS4; 160 kDa phosphotyrosine protein; Insulin receptor substrate 4; IRS 4; PY160; IRS4\_MOUSE; IRS-4; Phosphoprotein of 160 kDa; pp160.

**Research Area** Signal transduction

**Immunogen Species** Rabbit

**Clonality** Polyclonal

**React Species** Rat, (predicted: Mouse, )

**Applications** IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)  
not yet tested in other applications.  
optimal dilutions/concentrations should be determined by the end user.

**Theoretical molecular weight** 134kDa

**Cellular localization** cytoplasmic The cell membrane

**Form** Liquid

**Concentration** 1mg/ml

**immunogen** KLH conjugated synthetic peptide derived from mouse IRS-4: 401-500/1216

**Lsotype** IgG

**Purification** affinity purified by Protein A

**Buffer Solution** 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

**Storage** Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

**Attention** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

**PubMed** [PubMed](#)

**Product** IRS4 (Insulin receptor substrate 4) is a cytoplasmic protein that contains many

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## Detail

potential tyrosine and serine/threonine phosphorylation sites.

Tyrosine-phosphorylated IRS4 protein has been shown to associate with cytoplasmic signaling molecules that contain SH2 domains. The IRS4 protein is phosphorylated by the insulin receptor tyrosine kinase upon receptor stimulation.

### **Function:**

Acts as an interface between multiple growth factor receptors possessing tyrosine kinase activity, such as insulin receptor, IGF1R and FGFR1, and a complex network of intracellular signaling molecules containing SH2 domains. Involved in the IGF1R mitogenic signaling pathway. Promotes the AKT1 signaling pathway and BAD phosphorylation during insulin stimulation without activation of RPS6KB1 or the inhibition of apoptosis. Interaction with GRB2 enhances insulin-stimulated mitogen-activated protein kinase activity. May be involved in nonreceptor tyrosine kinase signaling in myoblasts. Plays a pivotal role in the proliferation/differentiation of hepatoblastoma cell through EPHB2 activation upon IGF1 stimulation. May play a role in the signal transduction in response to insulin and to a lesser extent in response to IL4 and GH on mitogenesis. Plays a role in growth, reproduction and glucose homeostasis. May acts as negative regulators of the IGFI signaling pathway by suppressing the function of IRS1 and IRS2.

### **Subunit:**

Interacts with CRK and CRKL. Interaction with CRK is stronger than with CRKL. Interacts with CRK via the phosphorylated YXXM motifs. Interacts with PLC-gamma, SHC1, PTK6, PPP4C and NISCH. Interacts with SOCS6 in response to stimulation with either insulin or IGF1. Interacts with PIK3R1 and GRB2.

### **Subcellular Location:**

Cell membrane; Peripheral membrane protein; Cytoplasmic side.

### **Tissue Specificity:**

Expressed in skeletal muscle, brain, heart, kidney and liver.

### **Post-translational modifications:**

Phosphorylated on tyrosine residues in response to both insulin and IGF1 signaling. Phosphorylated on Tyr-894 in response to FGF2 signaling. Phosphorylation of Tyr-894 is required for GRB2, phospholipase C-gamma and phosphatidylinositol 3-kinase interaction.

### **Similarity:**

Contains 1 IRS-type PTB domain.  
Contains 1 PH domain.

### **SWISS:**

Q9Z0Y7

**Gene ID:**  
16370

**Database links:**

[Entrez Gene: 8471](#) Human

[Entrez Gene: 16370](#) Mouse

[Entrez Gene: 315350](#) Rat

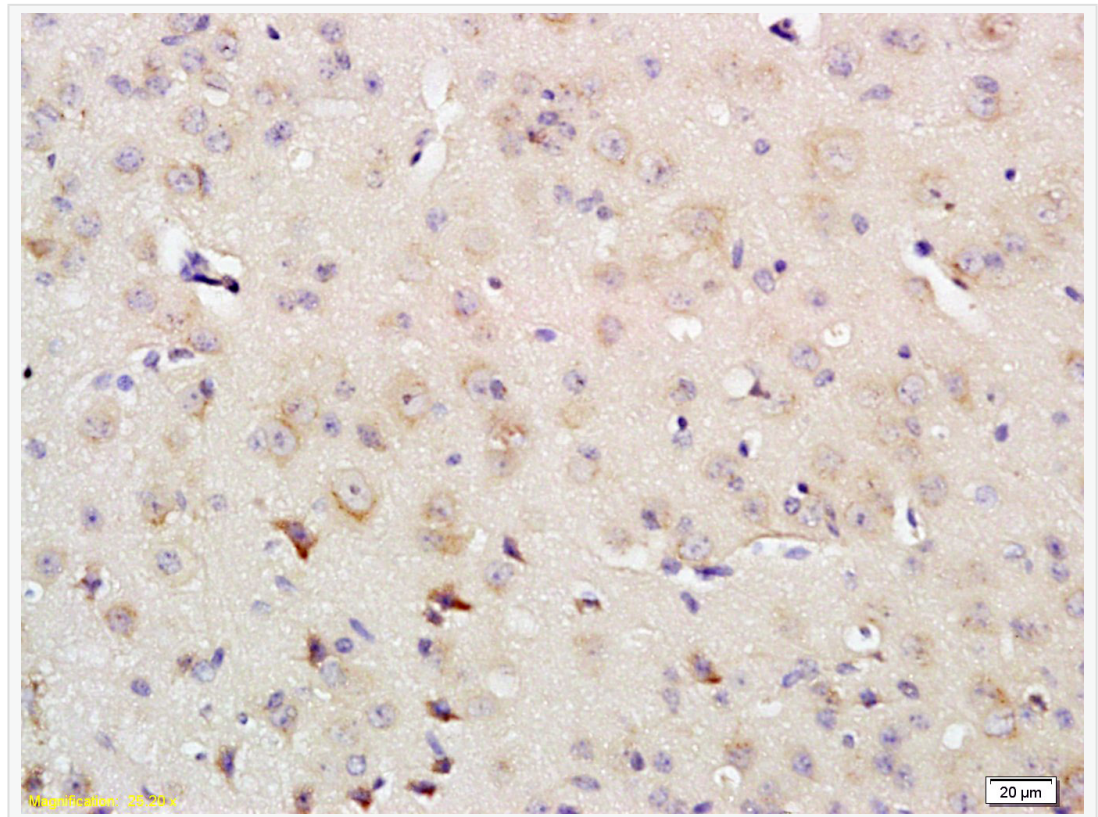
[Omim: 603510](#) Human

[SwissProt: O14654](#) Human

[Unigene: 460872](#) Human

胰岛素受体底物-4 属于 IRS 家族。IRS 作为 insulin/IGF 信号途径的核心介子对细胞的生长、发育及 The new supersedes the old 的调节起关键作用。

**Product  
Picture**



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;  
Antigen retrieval: citrate buffer ( 1M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;  
Incubation: Anti-IRS-4 Polyclonal Antibody, Unconjugated(SL0187R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining