

## Rabbit Anti-IRS1 antibody

SL0172R

**Product Name** IRS1

**Chinese Name** 胰岛素受体底物-1 抗体

**Alias** IRS1\_HUMAN; Insulin receptor substrate 1; IRS-1; IRS 1;

**Research Area** Cell biology Neurobiology Signal transduction Apoptosis Diabetes Endocrinopathy

**Immunogen Species** Rabbit

**Clonality** Polyclonal

**React Species** Mouse,Rat(predicted:Human,Pig,Cow,Horse,Rabbit,Sheep)  
IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-300 (Paraffin sections need antigen repair)

**Applications** not yet tested in other applications.  
optimal dilutions/concentrations should be determined by the end user.

**Theoretical molecular weight** 137kDa

**Cellular localization** The nucleus cytoplasmic The cell membrane

**Form** Liquid

**Concentration** 1mg/ml

**immunogen** KLH conjugated synthetic peptide derived from rat IRS-1: 1101-1200/1242

**Lsotype** IgG

**Purification** affinity purified by Protein A

**Buffer Solution** Mouse,Rat(predicted:Human,Pig,Cow,Horse,Rabbit,Sheep)1M TBS(pH7.4) with 1% BSA, Mouse,Rat(predicted:Human,Pig,Cow,Horse,Rabbit,Sheep)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** Insulin receptor substrates (IRS) are responsible for several insulin related activities, such

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**Detail**

as glucose homeostasis, cell growth, cell transformation, apoptosis and insulin signal transduction. Serine/threonine phosphorylation of IRS1 has been demonstrated to be a negative regulator of insulin signaling and is responsible for its degradation, although IRS1 degradation pathways are not well understood. IRS1 has also been shown to be constitutively activated in cancers such as breast cancer, Wilm's tumors, and adrenal cortical carcinomas, thus making IRS1 phosphorylation and subsequent degradation an attractive therapeutic target. To date there have been four subtypes identified: IRS1, 2, 3 and 4, with IRS1 being widely expressed.

**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.

**Subunit:**

Interacts with UBTF and PIK3CA. Interacts (via phosphorylated YXXM motifs) with PIK3R1. Interacts with ROCK1 and FER. Interacts (via PH domain) with PHIP. Interacts with GRB2. Interacts with SOCS7. Interacts (via IRS-type PTB domain) with IGF1R and INSR (via the tyrosine-phosphorylated NPXY motif). Interacts with ALK.

**Subcellular Location:**

IRS1 is predominantly found in the cytoplasm. Nuclear localization may occur in some cell types and under specific stimuli.

**Post-translational modifications:**

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.

Phosphorylation of Tyr-896 is required for GRB2-binding.

**DISEASE:**

Polymorphisms in IRS1 may be involved in the etiology of non-insulin-dependent diabetes mellitus (NIDDM)

**Similarity:**

Contains 1 IRS-type PTB domain.

Contains 1 PH domain.

**SWISS:**

P35568

**Gene ID:**

3667

**Database links:**

[Entrez Gene: 3667](#) Human

[Entrez Gene: 16367](#) Mouse

[Entrez Gene: 25467](#) Rat

[SwissProt: P35568](#) Human

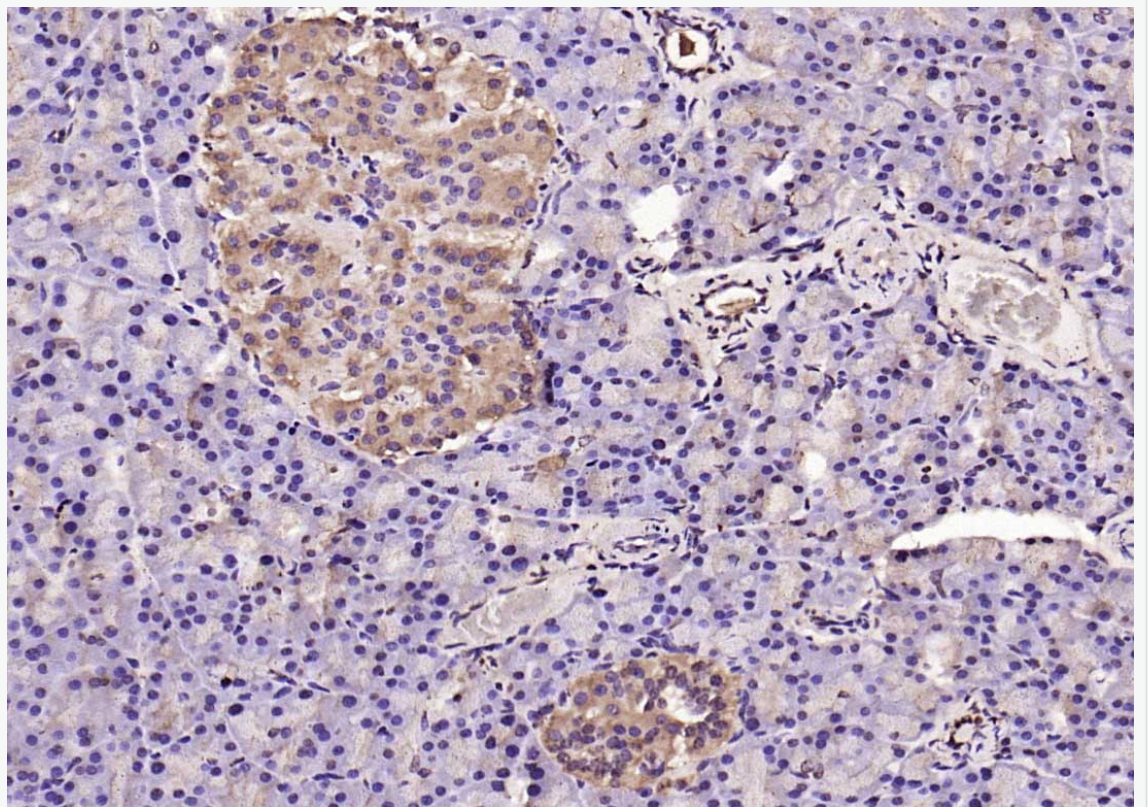
[SwissProt: P35569](#) Mouse

[SwissProt: P35570](#) Rat

信号传导 (Signaling Intermediates)

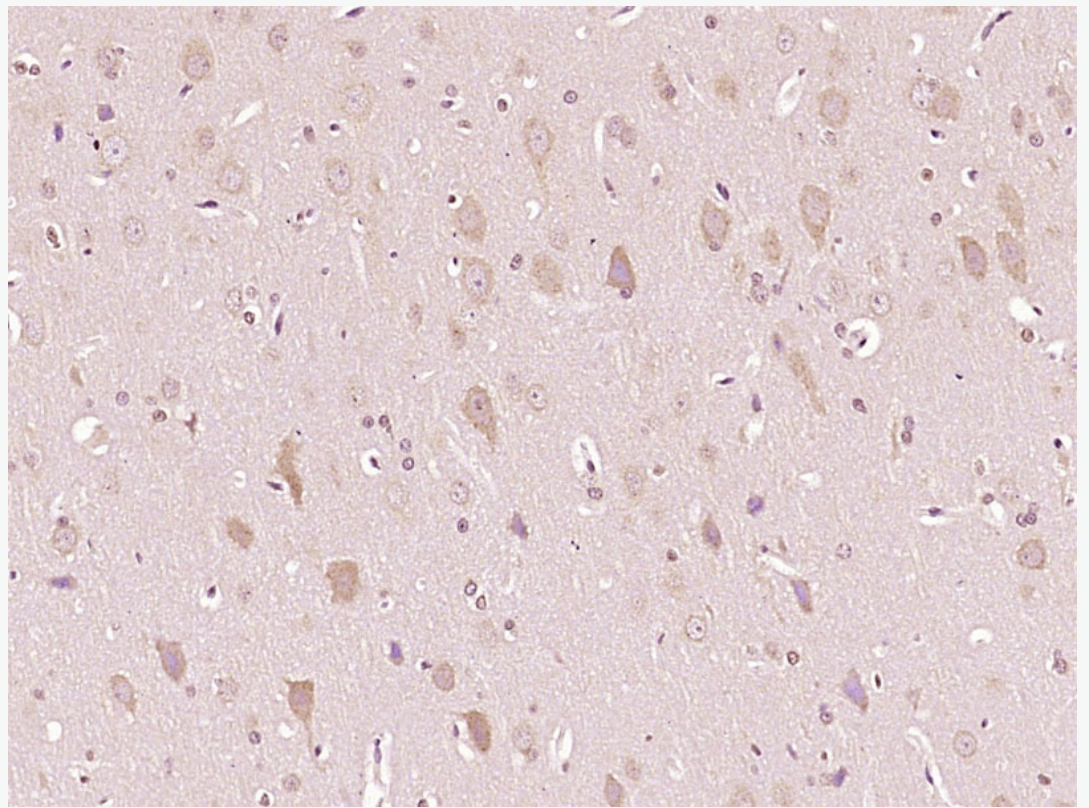
胰岛素受体底物-1 是细胞中分子量为 165-185kDa 的磷蛋白, 胰岛素受体的内源性底物。经胰岛素刺激后其酪氨酸残基被磷酸化。

**Product  
Picture**



Paraformaldehyde-fixed, paraffin embedded (rat pancreas); Antigen retrieval by

boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (IRS1) Polyclonal Antibody, Unconjugated (SL0172R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (IRS1) Polyclonal Antibody, Unconjugated



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(SL0172R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.