SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-IRS1 antibody

Catalog Number: SL22301R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	IRS1
Immunogen:	KLH conjugated synthetic peptide derived from human IRS1 : 721-820/1242
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-300 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Mouse,Rat(predicted:Human,Pig,Cow,Horse,Rabbit,Sheep)
Predicted MW.:	132kDa
Subcellular Location:	The cell membrane
Background:	Insulin receptor substrates (IRS) are responsible for several insulin related activities, such 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-

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	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:** Membrane; Single-pass type I membrane protein. **Tissue Specificity:** Isoform Long and isoform Short are predominantly expressed in tissue targets of insulin metabolic effects: liver, adipose tissue and skeletal muscle but are also expressed in the peripheral nerve, kidney, pulmonary alveoli, pancreatic acini, placenta vascular endothelium, fibroblasts, monocytes, granulocytes, erythrocytes and skin. Isoform Short is preferentially expressed in fetal cells such as fetal fibroblasts, muscle, liver and kidney. Found as a hybrid receptor with IGF1R in muscle, heart, kidney, adipose tissue, skeletal muscle, hepatoma, fibroblasts, spleen and placenta (at protein level). Overexpressed in several tumors, including breast, colon, lung, ovary, and thyroid carcinomas. **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. Phosphorylated by ALK. Phosphorylated at Ser-270, Ser-307, Ser-636 and Ser-1101 by RPS6KB1; phosphorylation induces accelerated degradation of IRS1. DISEASE: Polymorphisms in IRS1 may be involved in the etiology of non-insulin-dependent diabetes mellitus (NIDDM) [MIM:125853]. **Similarity:** Contains 1 IRS-type PTB domain. Contains 1 PH domain. **Database links:** **Entrez Gene:** 3667 Human **Entrez Gene:** 16367 Mouse **Entrez Gene:** 25467 Rat **SwissProt:** P35568 Human **SwissProt:** P35569 Mouse **SwissProt:** P35570 Rat

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[VALIDATION IMAGES]

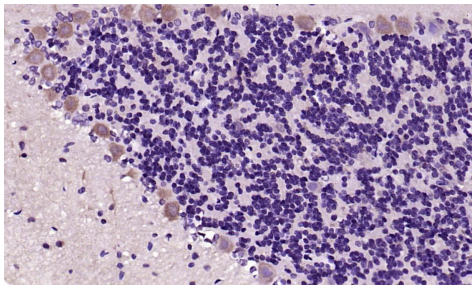


Figure 1. Paraformaldehyde-fixed, paraffin embedded (rat cerebellum); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (IRS1) Polyclonal Antibody, Unconjugated (SL22301R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

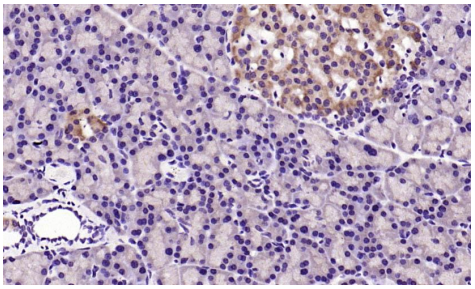


Figure 2. Paraformaldehyde-fixed, paraffin embedded (mouse pancreas); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (IRS1) Polyclonal Antibody, Unconjugated (SL22301R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

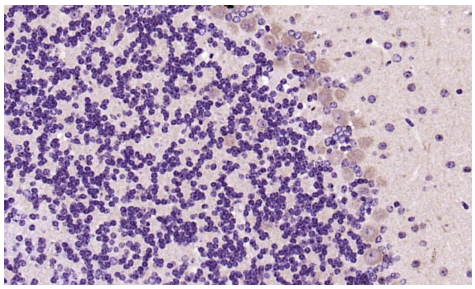


Figure 3. Paraformaldehyde-fixed, paraffin embedded (mouse cerebellum); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (IRS1) Polyclonal Antibody, Unconjugated (SL22301R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

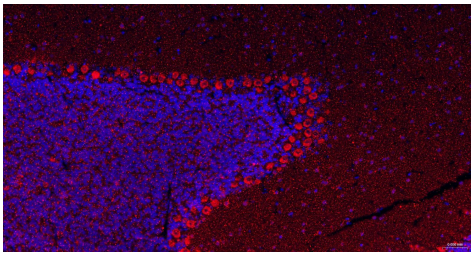


Figure 4. Paraformaldehyde-fixed, paraffin embedded Rat Cerebellum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with IRS1 Polyclonal Antibody, Unconjugated (SL22301R) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (Red, SL0295G-BF594), DAPI (blue, C02-04002) was used to stain the cell nuclei

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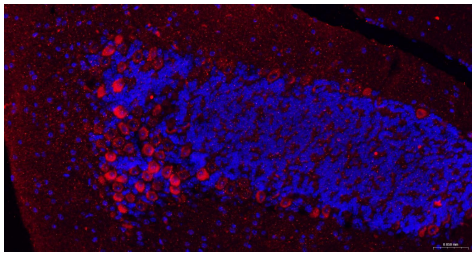


Figure 5. Paraformaldehyde-fixed, paraffin embedded Mouse Cerebellum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with IRS1 Polyclonal Antibody, Unconjugated (SL22301R) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (Red, SL0295G-BF594), DAPI (blue, C02-04002) was used to stain the cell nuclei

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