10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-IRS1 Picoband Antibody

Catalog # ABO11914

Specification

Anti-IRS1 Picoband Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P35568
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Insulin receptor substrate 1(IRS1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-IRS1 Picoband Antibody - Additional Information

Gene ID 3667

Other Names
Insulin receptor substrate 1, IRS-1, IRS1

Calculated MW
131591 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Protein Name
Insulin receptor substrate 1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human IRS1 recombinant protein (Position: S1041-Q1242). Human IRS1 shares 78% and 80% amino acid (aa) sequences identity with mouse and rat IRS1, respectively.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution,**

at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Contains 1 IRS-type PTB domain.

Anti-IRS1 Picoband Antibody - Protein Information

Name IRS1

Function
Signaling adapter protein that participates in the signal transduction from two prominent receptor tyrosine kinases, insulin receptor/INSR and insulin-like growth factor I receptor/IGF1R (PubMed:7541045, PubMed:33991522, PubMed:38625937). Plays therefore an important role in development, growth, glucose homeostasis as well as lipid metabolism (PubMed:19639489). Upon phosphorylation by the insulin receptor, functions as a signaling scaffold that propagates insulin action through binding to SH2 domain-containing proteins including the p85 regulatory subunit of PI3K, NCK1, NCK2, GRB2 or SHP2 (PubMed:11171109, PubMed:8265614). Recruitment of GRB2 leads to the activation of the guanine nucleotide exchange factor SOS1 which in turn triggers the Ras/Raf/MEK/MAPK signaling cascade (By similarity). Activation of the PI3K/AKT pathway is responsible for most of insulin metabolic effects in the cell, and the Ras/Raf/MEK/MAPK is involved in the regulation of gene expression and in cooperation with the PI3K pathway regulates cell growth and differentiation. Acts a positive regulator of the Wnt/beta-catenin signaling pathway through suppression of DVL2 autophagy-mediated degradation leading to cell proliferation (PubMed:24616100).

Cellular Location
Cytoplasm. Nucleus. Note=Nuclear or cytoplasmic localization of IRS1 correlates with the transition from proliferation to chondrogenic differentiation.

Anti-IRS1 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-IRS1 Picoband Antibody - Images

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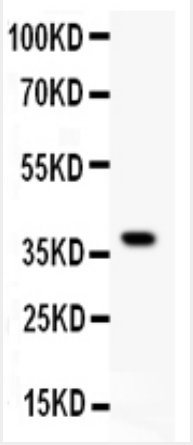
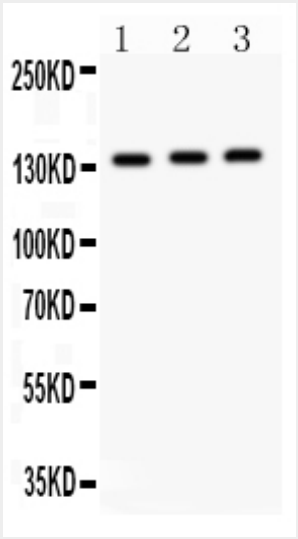
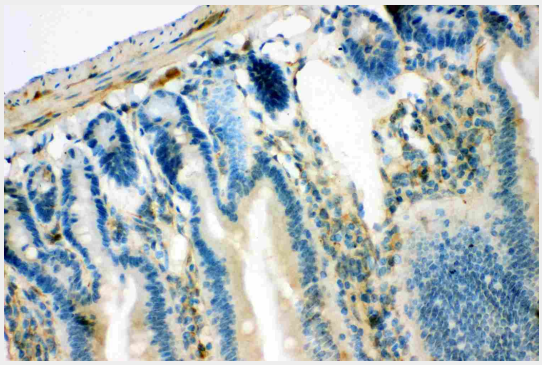


Anti- IRS1 antibody, ABO11914, Western blottingAll lanes: Anti IRS1 (ABO11914) at 0.5ug/mlWB: Recombinant Human IRS1 Protein 0.5ngPredicted bind size: 39KDObserved bind size: 39KD



Anti- IRS1 antibody, ABO11914, Western blottingAll lanes: Anti IRS1 (ABO11914) at 0.5ug/mlLane 1: A549 Whole Cell Lysate at 40ugLane 2: MM453 Whole Cell Lysate at 40ugLane 3: JURKAT Whole Cell Lysate at 40ugPredicted bind size: 132KDObserved bind size: 132KD



Anti- IRS1 antibody, ABO11914, IHC(P)IHC(P): Mouse Intestine Tissue

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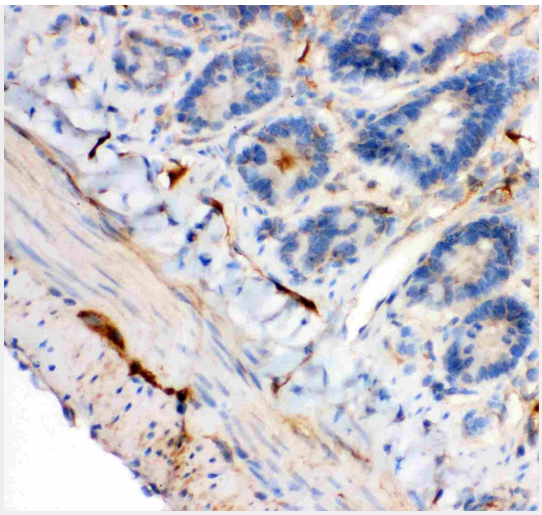
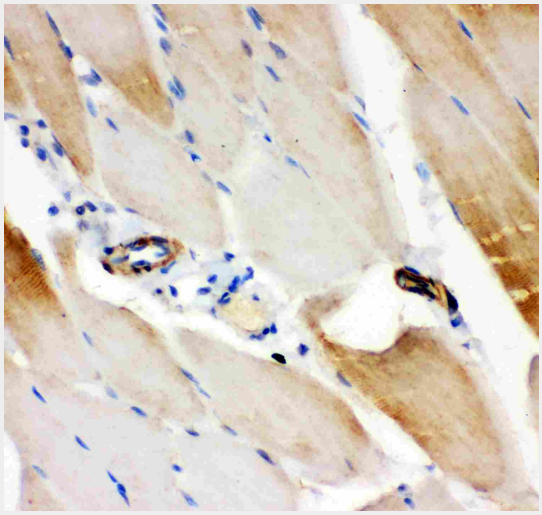
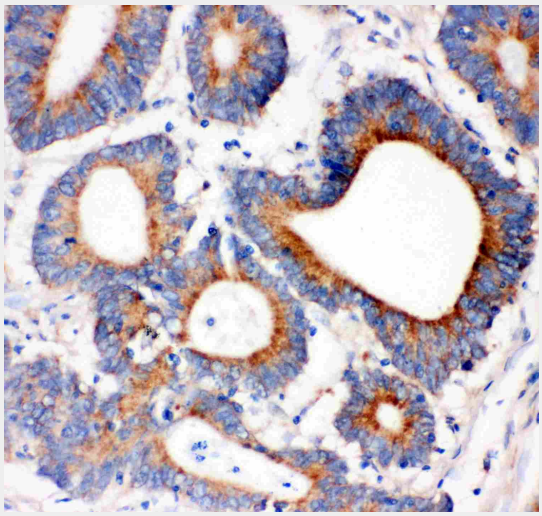


Anti- IRS1 antibody, ABO11914, IHC(P)IHC(P): Rat Intestine Tissue



Anti- IRS1 antibody, ABO11914, IHC(P)IHC(P): Rat Skeletal Muscle Tissue



Anti- IRS1 antibody, ABO11914, IHC(P)IHC(P): Human Intestinal Cancer Tissue

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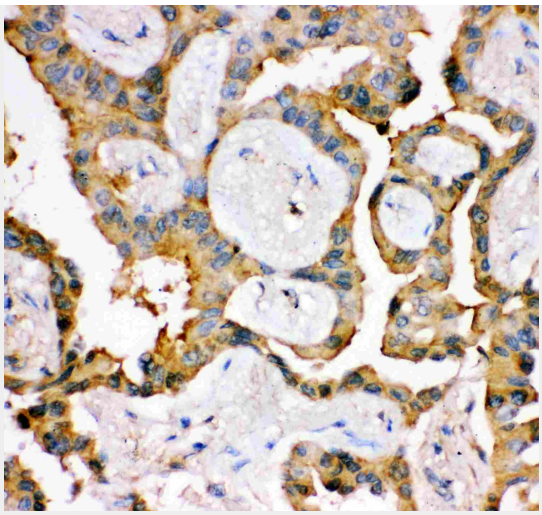

Anti- IRS1 antibody, ABO11914, IHC(P)IHC(P): Human Lung Cancer Tissue

Anti-IRS1 Picoband Antibody - Background

Insulin receptor substrate 1(IRS-1) is a signalling adapter protein that in humans is encoded by the IRS-1 gene. It is mapped to 2q36.3. This gene exhibited no intrinsic enzyme activity, and it can serve as a docking protein involved in binding and activating other signal transduction molecules after being phosphorylated on tyrosine by insulin receptor kinase. IRS1 plays a key role in transmitting signals from the insulin and insulin-like growth factor-1(IGF-1) receptors to intracellular pathways PI3K/Akt and Erk MAP kinase pathways. IRS1 also has important biological function for both metabolic and mitogenic(growth promoting) pathways. In addition to those, IRS1 is a key regulator of PI3K within malignant cells.