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

Anti-IRS1 Antibody

Catalog # ABO11578

Product Information

Application	WB
Primary Accession	P35569
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 in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	16367
Other Names	Insulin receptor substrate 1, IRS-1, Irs1, Irs-1
Calculated MW	130723
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Tissue Specificity	Expressed in osteoblasts, but not in osteoclasts. .
Source	Eukaryota
Protein Name	Insulin receptor substrate 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of mouse IRS1(106-122aa WYQALLQLHNRAKAHHD), identical to the related rat sequence, and different from the related human sequence by one amino acid.
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.

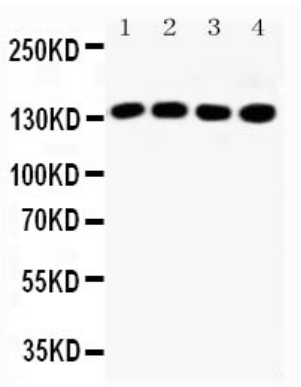
Protein Information

Name	Irs1
Synonyms	Irs-1
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. Plays therefore an important role in development, growth, glucose homeostasis as well as lipid metabolism (PubMed:7526222). 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 (By similarity). 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 (By similarity). Acts a positive regulator of the Wnt/beta-catenin signaling pathway through suppression of DVL2 autophagy-mediated degradation leading to cell proliferation (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:P35568}. Nucleus {ECO:0000250|UniProtKB:P35568}. Note=Nuclear or cytoplasmic localization of IRS1 correlates with the transition from proliferation to chondrogenic differentiation. {ECO:0000250|UniProtKB:P35568}
Tissue Location	Expressed in osteoblasts, but not in osteoclasts.

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 plays 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.

Images



Anti-IRS1 antibody, ABO11578, All Western blottingAll lanes: Anti-IRS1(ABO11578) at 0.5ug/mlLane 1: HELA Whole Cell Lysate at 40ugLane 2: A549 Whole Cell Lysate at 40ugLane 3: 293T Whole Cell Lysate at 40ugLane 4: MCF-7 Whole Cell Lysate at 40ugPredicted bind size: 132KDObserved bind size: 132KD