Datasheet for ABIN968515

anti-IRS1 antibody (AA 1131-1234)

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Overview

Quantity:	150 µg
Target:	IRS1
Binding Specificity:	AA 1131-1234
Reactivity:	Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This IRS1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

Product Details

Immunogen:	Rat IRS-1 aa. 1131-1234
Clone:	6-IRS
Isotype:	IgG1
Cross-Reactivity:	Mouse (Murine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

	chromatography.

Target Details

Target:	IRS1
Alternative Name:	IRS-1 (IRS1 Products)
Background:	The IRS (Insulin receptor substrate) proteins IRS-1, IRS-2, IRS-3, and IRS-4 are major substrates of the insulin receptor tyrosine kinase and the insulin-like growth factor-1 receptor. IRS proteins contain an N-terminal pleckstrin homology (PH) domain, an ATP-binding domain, and multiple tyrosine phosphorylation sites in the C-terminus. Following insulin receptor ligation, IRS-1 binds to the juxtamembrane region of the receptor and is tyrosine phosphorylated. This facilitates its interaction with SH2 domain-containing signaling proteins, such as PI3 kinase, fyn, Grb2, and PTP1D. Phosphorylation dramatically reduces the affinity of IRS-1 for the insulin receptor, indicating that dissociation from the receptor and subsequent subcellular translocation are important to IRS-1 function in the pleiotropic effects induced by insulin. In support of this, IRS-1-null mice are viable, but exhibit growth retardation and abnormal glucose metabolism. In cases of reduced IRS-1 expression, certain IRS-1 functions can be assumed by the related IRS-2 protein, while other activities linked to IRS-1 are inhibited. Thus, IRS-1 is an essential component of insulin induced signal transduction. This antibody is routinely tested by western blot analysis.
Molecular Weight:	180 kDa
Pathways:	Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Positive Regulation of Peptide Hormone Secretion, Hormone Transport, Negative Regulation of Hormone Secretion, Response to Growth Hormone Stimulus, Carbohydrate Homeostasis, Regulation of Carbohydrate Metabolic Process

Application Details

Comment:	Related Products: ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL

Handling

Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20° C.

Publications

Product cited in:

Obici, Feng, Karkanias, Baskin, Rossetti: "Decreasing hypothalamic insulin receptors causes hyperphagia and insulin resistance in rats." in: **Nature neuroscience**, Vol. 5, Issue 6, pp. 566-72, (2002) (PubMed).

Paz, Liu, Shorer, Hemi, LeRoith, Quan, Kanety, Seger, Zick: "Phosphorylation of insulin receptor substrate-1 (IRS-1) by protein kinase B positively regulates IRS-1 function." in: **The Journal of biological chemistry**, Vol. 274, Issue 40, pp. 28816-22, (1999) (PubMed).

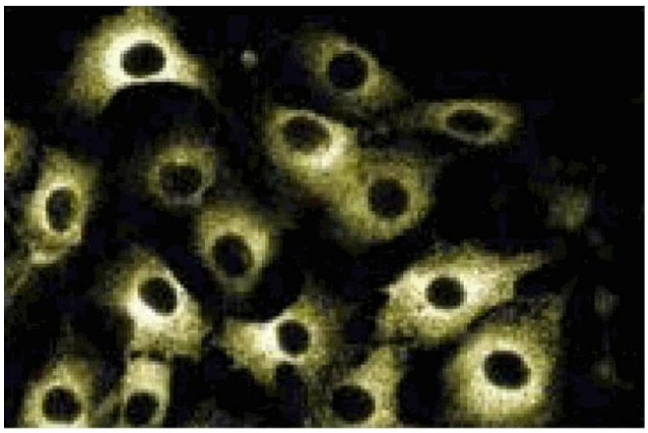
Kuhné, Zhao, Rowles, Lavan, Shen, Fischer, Lienhard: "Dephosphorylation of insulin receptor substrate 1 by the tyrosine phosphatase PTP2C." in: **The Journal of biological chemistry**, Vol. 269, Issue 22, pp. 15833-7, (1994) (PubMed).

Backer, Myers, Shoelson, Chin, Sun, Miralpeix, Hu, Margolis, Skolnik, Schlessinger: " Phosphatidylinositol 3'-kinase is activated by association with IRS-1 during insulin stimulation." in: **The EMBO journal**, Vol. 11, Issue 9, pp. 3469-79, (1992) (PubMed).

Sun, Rothenberg, Kahn, Backer, Araki, Wilden, Cahill, Goldstein, White: "Structure of the insulin receptor substrate IRS-1 defines a unique signal transduction protein." in: **Nature**, Vol. 352, Issue 6330, pp. 73-7, (1991) (PubMed).

Western Blotting

Image 1. Western blot analysis of IRS-1 on RSV-3T3 cell lysate. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of anti-IRS-1.



Immunofluorescence

Image 2. Immunofluorescent staining of RSV-3T3 cells.

Image 3.

Please check the product details page for more images. Overall 4 images are available for ABIN968515.