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Datasheet for ABIN6242226

anti-Insulin Receptor antibody (AA 1325-1358)

3 Images

Overview

Quantity:	50 µL
Target:	Insulin Receptor (INSR)
Binding Specificity:	AA 1325-1358
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Insulin Receptor antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Immunogen:	This Mouse Insr antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 1325-1358 amino acids from Mouse Insr.
Clone:	RB50340
Isotype:	Ig Fraction
Purification:	This antibody is purified through a protein A column, followed by peptide affinity purification.

Target Details

Target:	Insulin Receptor (INSR)
Alternative Name:	Insr (INSR Products)
Background:	Receptor tyrosine kinase which mediates the pleiotropic actions of insulin. Binding of insulin

Target Details

leads to phosphorylation of several intracellular substrates, including, insulin receptor substrates (IRS1, 2, 3, 4), SHC, GAB1, CBL and other signaling intermediates. Each of these phosphorylated proteins serve as docking proteins for other signaling proteins that contain Src-homology-2 domains (SH2 domain) that specifically recognize different phosphotyrosines residues, including the p85 regulatory subunit of PI3K and SHP2. Phosphorylation of IRSs proteins lead to the activation of two main signaling pathways: the PI3K-AKT/PKB pathway, which is responsible for most of the metabolic actions of insulin, and the Ras-MAPK pathway, which regulates expression of some genes and cooperates with the PI3K pathway to control cell growth and differentiation. Binding of the SH2 domains of PI3K to phosphotyrosines on IRS1 leads to the activation of PI3K and the generation of phosphatidylinositol-(3, 4, 5)-triphosphate (PIP3), a lipid second messenger, which activates several PIP3-dependent serine/threonine kinases, such as PDK1 and subsequently AKT/PKB. The net effect of this pathway is to produce a translocation of the glucose transporter SLC2A4/GLUT4 from cytoplasmic vesicles to the cell membrane to facilitate glucose transport. Moreover, upon insulin stimulation, activated AKT/PKB is responsible for: anti-apoptotic effect of insulin by inducing phosphorylation of BAD, regulates the expression of gluconeogenic and lipogenic enzymes by controlling the activity of the winged helix or forkhead (FOX) class of transcription factors. Another pathway regulated by PI3K- AKT/PKB activation is mTORC1 signaling pathway which regulates cell growth and metabolism and integrates signals from insulin. AKT mediates insulin-stimulated protein synthesis by phosphorylating TSC2 thereby activating mTORC1 pathway. The Ras/RAF/MAP2K/MAPK pathway is mainly involved in mediating cell growth, survival and cellular differentiation of insulin. Phosphorylated IRS1 recruits GRB2/SOS complex, which triggers the activation of the Ras/RAF/MAP2K/MAPK pathway. In addition to binding insulin, the insulin receptor can bind insulin-like growth factors (IGF1 and IGFII). When present in a hybrid receptor with IGF1R, binds IGF1 (By similarity).

Molecular Weight: 155610

UniProt: [P15208](#)

Pathways: [NF-kappaB Signaling](#), [RTK Signaling](#), [AMPK Signaling](#), [Carbohydrate Homeostasis](#), [Regulation of Cell Size](#), [Regulation of Carbohydrate Metabolic Process](#), [Growth Factor Binding](#), [Negative Regulation of Transporter Activity](#)

Application Details

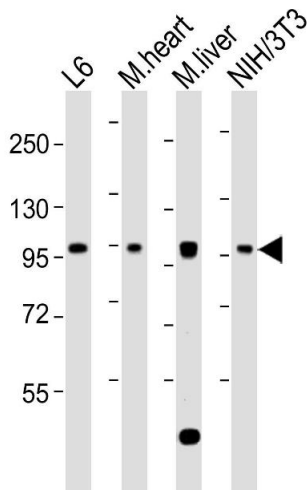
Application Notes: WB: 1:2000. WB: 1:2000. WB: 1:2000

Restrictions: For Research Use only

Handling

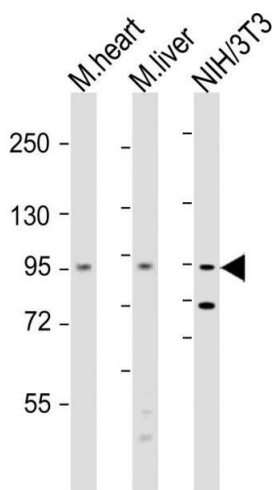
Format:	Liquid
Buffer:	Purified polyclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Expiry Date:	6 months

Images



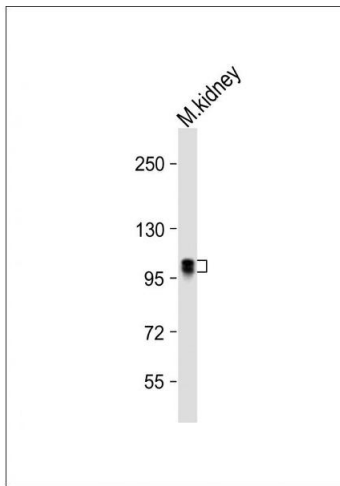
Western Blotting

Image 1. All lanes : Anti-Insr Antibody at 1:2000 dilution
Lane 1: L6 whole cell lysate Lane 2: mouse heart lysate Lane 3: mouse liver lysate Lane 4: NIH/3T3 whole cell lysate
Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 156 kDa Blocking/Dilution buffer: 5 % NFDM/TBST.



Western Blotting

Image 2. All lanes : Anti-Insr Antibody at 1:2000 dilution
Lane 1: mouse heart lysate Lane 2: mouse liver lysate Lane 3: NIH/3T3 whole cell lysate
Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 156 kDa Blocking/Dilution buffer: 5 % NFDM/TBST.



Western Blotting

Image 3. Anti-Insr Antibody at 1:2000 dilution + mouse kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 156 kDa
Blocking/Dilution buffer: 5 % NFDM/TBST.