

Datasheet for ABIN671841
anti-Insulin Receptor antibody (AA 51-150)[Go to Product page](#)

2 Images

2 Publications

Overview

Quantity:	100 µL
Target:	Insulin Receptor (INSR)
Binding Specificity:	AA 51-150
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Insulin Receptor antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Flow Cytometry (FACS), Immunofluorescence (Cultured Cells) (IF (cc)), Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human Insulin Receptor
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Dog,Cow,Sheep,Horse,Chicken,Rabbit
Purification:	Purified by Protein A.

Target Details

Target:	Insulin Receptor (INSR)
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Target Details

Alternative Name: Insulin Receptor ([INSR Products](#))

Background: Synonyms: HHF5, CD220, Insulin receptor, IR, INSR

Background: Receptor tyrosine kinase which mediates the pleiotropic actions of insulin. Binding of insulin 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.

Gene ID: 3643

UniProt: [P06213](#)

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 1:300-5000
ELISA 1:500-1000
FCM 1:20-100

Application Details

IHC-P 1:200-400
IHC-F 1:100-500
IF(IHC-P) 1:50-200
IF(IHC-F) 1:50-200
IF(ICC) 1:50-200

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 1 µg/µL

Buffer: 0.01M TBS(pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.

Preservative: ProClin

Precaution of Use: This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.

Storage: 4 °C, -20 °C

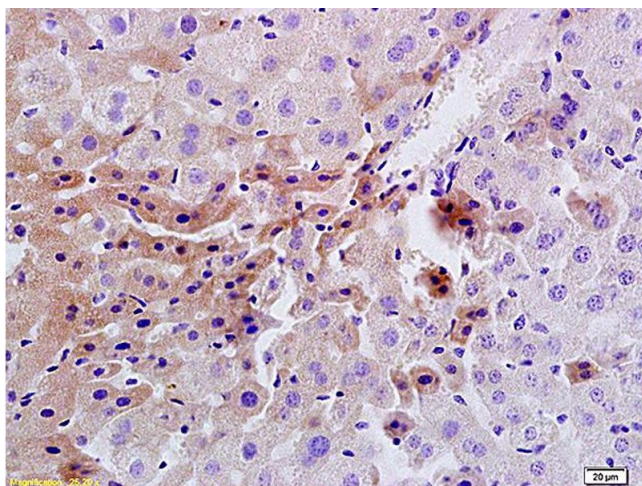
Storage Comment: Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Expiry Date: 12 months

Publications

Product cited in: Tian, Bai, Chen, Fang, Liu, Chen: "Anti-diabetic effect of methylswertianin and bellidifolin from *Swertia punicea* Hemsl. and its potential mechanism." in: **Phytomedicine : international journal of phytotherapy and phytopharmacology**, Vol. 17, Issue 7, pp. 533-9, (2010) ([PubMed](#)).

Bai, Chen, Liu, Tian, Zhou, Liu, Fang, Chen: "Effects of water extract and crude polysaccharides from *Liriope spicata* var. *prolifera* on InsR/IRS-1/PI3K pathway and glucose metabolism in mice." in: **Journal of ethnopharmacology**, Vol. 125, Issue 3, pp. 482-6, (2009) ([PubMed](#)).



Immunohistochemistry

Image 1. Formalin-fixed and paraffin embedded rat liver tissue labeled Anti-Insulin Receptor/CD220 Polyclonal Antibody, Unconjugated (ABIN671841) at 1:200, followed by conjugation to the secondary antibody and DAB staining

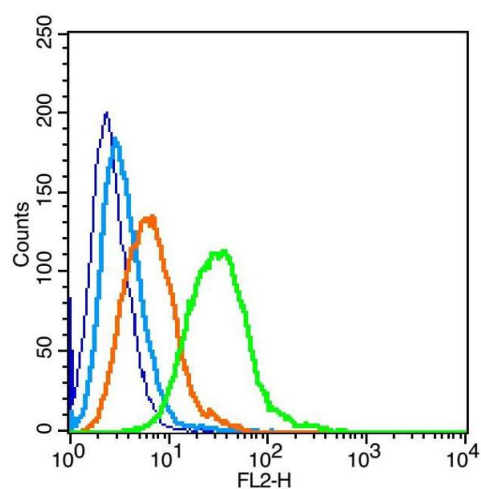


Image 2. Raji cells probed with Estrogen Receptor alpha + beta Antibody, unconjugated at 1:100 dilution for 30 minutes compared to control cells (blue) and isotype control (orange)