bs-0047R **[Primary Antibody]**

Insulin Receptor alpha Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 3643 **SWISS:** P06213

Target: Insulin Receptor alpha

Immunogen: KLH conjugated synthetic peptide derived from human Insulin Receptor alpha: 701-760/1382.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: The human insulin receptor is a heterotetrameric membrane glycoprotein consisting of disulfide linked subunits in a beta-alpha-alpha-beta configuration. The beta subunit (95 kDa) possesses a single transmembrane domain, whereas the alpha subunit (135 kDa) is completely extracellular. The insulin receptor exhibits receptor tyrosine kinase (RTK) activity. RTKs are single pass transmembrane receptors that possess intrinsic cytoplasmic enzymatic activity, catalyzing the transfer of the gamma phosphate of ATP to tyrosine residues in protein substrates. RTKs are essential components of signal transduction pathways that affect cell proliferation, differentiation, migration and metabolism. Included in this large protein family are the insulin receptor and the receptors for growth factors such as epidermal growth factor, fibroblast growth factor and vascular endothelial growth factor. Receptor activation occurs through ligand binding, which facilitates receptor dimerization and autophosphorylation of specific tyrosine residues in the cytoplasmic portion. The interaction of insulin with the alpha subunit of the insulin receptor activates the protein tyrosine kinase of the beta subunit, which then undergoes an autophosphorylation that increases its tyrosine kinase activity. Three adapter proteins, IRS1, IRS2 and Shc, become phosphorylated on tyrosine residues following insulin receptor activation. These three phosphorylated proteins then interact with SH2 domain containing signaling proteins.

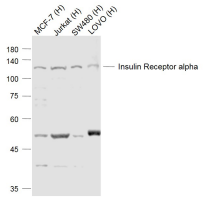
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (0.2μg/Test)

Reactivity: Human, Rat (predicted: Mouse, Rabbit, Pig, Sheep, Cow, Chicken, Dog, Horse)

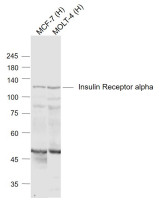
Predicted MW.: 80/152 kDa

Subcellular Location: Cell membrane

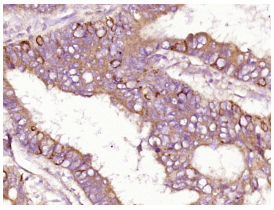
VALIDATION IMAGES



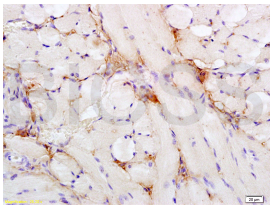
Sample: Lane 1: MCF-7 (Human) Cell Lysate at 30 ug Lane 2: Jurkat (Human) Cell Lysate at 30 ug Lane 3: SW480 (Human) Cell Lysate at 30 ug Lane 4: LOVO (Human) Cell Lysate at 30 ug Primary: Anti-Insulin Receptor alpha (bs-0047R) at 1/500 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 120 kD Observed band size: 120 kD



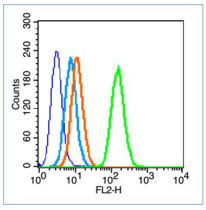
Sample: Lane 1: MCF-7 (Human) Cell Lysate at 30 ug Lane 2: MOLT-4 (Human) Cell Lysate at 30 ug Primary: Anti-Insulin Receptor alpha (bs-0047R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 120 kD Observed band size: 120 kD



Paraformaldehyde-fixed, paraffin embedded (human colon carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Insulin Receptor alpha) Polyclonal Antibody, Unconjugated (bs-0047R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Tissue/cell: rat tongue tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti- Insulin Receptor alpha Polyclonal Antibody, Unconjugated(bs-0047R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control (blue line): HL60(blue). Primary Antibody (green line): Rabbit Anti-Insulin Receptor alpha antibody (bs-0047R) Dilution: 0.2µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE Dilution: 1µg /test. Protocol The cells were fixed with 70% ethanol Overnight at 4°C. Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed by the antibody for 15 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=4.414]** Lin IC et al. High fructose diet induces early mortality via autophagy factors accumulation in the rostralventrolateral medulla as ameliorated by pioglitazone. J Nutr Biochem. 2019 Apr 8;69:87-97. WB ;Rat. 31063919