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Anti-Human IRS1 DyLight® 488 conjugated Antibody(monoclonal, 10I3)

Catalog # ABO14906

Product Information

Application	FC
Primary Accession	P35569
Host	Mouse
Isotype	Mouse IgG2a
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-Human IRS1 DyLight® 488 conjugated Antibody (monoclonal, 10I3) . Tested in Flow Cytometry applications. This antibody reacts with Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500 □g/ml.

Additional Information

Gene ID	16367
Other Names	Insulin receptor substrate 1, IRS-1, Irs1, Irs-1
Calculated MW	130723
Application Details	Flow Cytometry, 1-3 □g/1x10^6 cells, Human
Subcellular Localization	ciliary basal body; cytosol; nucleus; caveola; insulin receptor complex; plasma membrane; cytoplasm; intracellular membrane-bounded organelle; Complete GO annotation on QuickGO
Tissue Specificity	Expressed in osteoblasts, but not in osteoclasts.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Clone Names	Clone: 10I3
Immunogen	E.coli-derived human IRS1 recombinant protein (Position: S1041-Q1242). Human IRS1 shares 78% and 80% amino acid (aa) sequence identity with mouse and rat IRS1, respectively.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross-reactivity with other proteins.
Storage	At -20°C for one year from date of receipt. Avoid repeated freezing and

thawing. Protect from light.

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 has 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

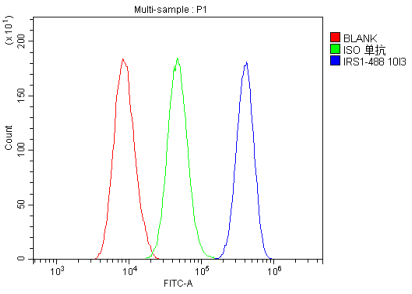

Figure 1. Flow Cytometry analysis of A549 cells using anti-Human IRS1 antibody (M04544-Dyl488).
Overlay histogram showing A549 cells stained with M04544-Dyl488 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Human IRS1 Antibody (M04544-Dyl488,1 µg/1x10^6 cells) for 30 min at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6 cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

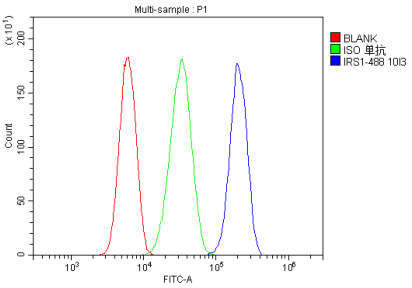

Figure 2. Flow Cytometry analysis of SiHa cells using anti-Human IRS1 antibody (M00480-Dyl488).
Overlay histogram showing SiHa cells stained with M00480-Dyl488 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Human IRS1 Antibody (M00480-Dyl488,1 µg/1x10^6 cells) for 30 min at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.