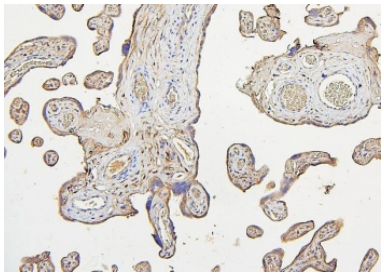
IRS1 Antibody 10I3 / Insulin Receptor Substrate 1 Monoclonal Antibody [clone 10I3] (RQ5507)

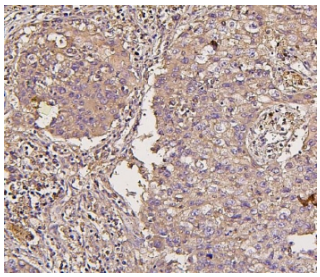
Catalog No.	Formulation	Size
RQ5507	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

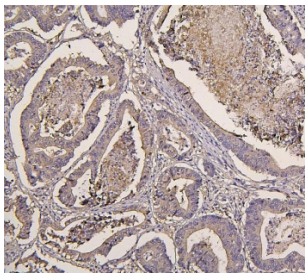
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a
Clone Name	10I3
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P35568
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Flow cytometry: 1-3ug/million cells Immunofluorescence/Immunocytochemistry: 2-4ug/ml
Limitations	This IRS1 Antibody 10I3 / Insulin Receptor Substrate 1 Monoclonal Antibody is available for research use only.



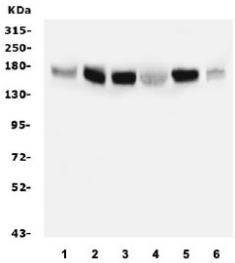
IRS1 Antibody 10I3 Staining in Human Placenta by IHC. Immunohistochemistry staining of FFPE human placenta with IRS1 Antibody (clone 10I3) shows brown immunoreactivity within placental villi, with prominent staining in trophoblastic cells and weaker labeling in portions of the villous stroma. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 6, 10mM citrate buffer for 20 min followed by cooling before testing. The staining demonstrates detection of IRS1 in human placental tissue using this Insulin Receptor Substrate 1 Monoclonal Antibody.



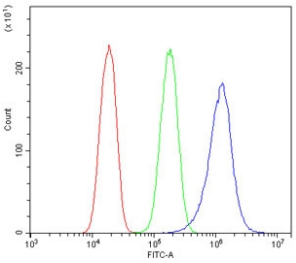
IRS1 Antibody 10I3 Staining in Human Lung Cancer by IHC. Immunohistochemistry staining of FFPE human lung cancer with IRS1 Antibody (clone 10I3) shows widespread brown immunoreactivity within the tumor-cell population. Labeling is predominantly cytoplasmic, with heterogeneous staining intensity across the tissue and comparatively little nuclear staining. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 6, 10mM citrate buffer for 20 min followed by cooling before testing. The cytoplasmic staining pattern demonstrates detection of IRS1 in human lung cancer using this Insulin Receptor Substrate 1 Monoclonal Antibody.



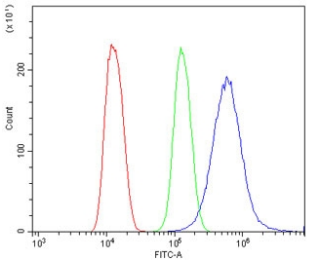
IRS1 Antibody 10I3 Staining in Human Colon Cancer by IHC. Immunohistochemistry staining of FFPE human colon cancer with IRS1 Antibody (clone 10I3) shows brown immunoreactivity within malignant glandular epithelial cells. Staining is predominantly cytoplasmic and heterogeneous, with stronger labeling in portions of the tumor and comparatively weak staining in surrounding stromal areas. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 6, 10mM citrate buffer for 20 min followed by cooling before testing. The staining demonstrates detection of IRS1 in human colon cancer using this Insulin Receptor Substrate 1 Monoclonal Antibody.



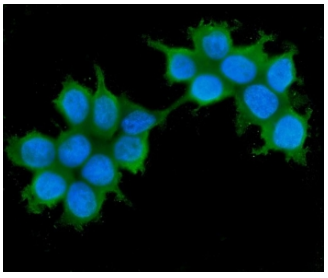
IRS1 Antibody 10I3 Detection in Multiple Human Cell Lines by WB. Western blot testing with IRS1 Antibody (clone 10I3) shows prominent high-molecular-weight bands in human A549 (lane 1), T-47D (lane 2), Caco-2 (lane 3), SW620 (lane 4), HeLa (lane 5), and Raji (lane 6) cell lysates. The major signals migrate at approximately 160-180 kDa, within the reported 132-185 kDa range for IRS1 depending on phosphorylation state. Signal intensity varies among the six samples, with particularly strong bands in T-47D, Caco-2, and HeLa lysates. This experiment demonstrates detection of IRS1 across multiple human cell lines using this Insulin Receptor Substrate 1 Monoclonal Antibody.



IRS1 Antibody 10I3 Detection in Human PC-3 Prostate Cancer Cells by FACS. Flow cytometry analysis of human PC-3 prostate cancer cells with IRS1 Antibody (clone 10I3) at 1 ug/million cells shows a strong rightward fluorescence shift in the antibody-stained population (blue) relative to the isotype control (green) and cells-alone control (red). Cells were blocked with goat serum before antibody staining. The clear separation of the blue population from both controls demonstrates intracellular detection of IRS1 in PC-3 cells using this Insulin Receptor Substrate 1 Monoclonal Antibody.



IRS1 Antibody 10I3 Detection in Human U-2 OS Osteosarcoma Cells by FACS. Flow cytometry analysis of human U-2 OS osteosarcoma cells with IRS1 Antibody (clone 10I3) at 1 ug/million cells shows a clear rightward fluorescence shift in the antibody-stained population (blue) relative to the isotype control (green) and cells-alone control (red). Cells were blocked with goat serum before antibody staining. The separation of the stained population from both controls demonstrates intracellular detection of IRS1 in U-2 OS cells using this Insulin Receptor Substrate 1 Monoclonal Antibody.



IRS1 Antibody 10I3 Detection in Human MCF7 Breast Cancer Cells by IF. Immunofluorescence staining of FFPE human MCF7 breast cancer cells with IRS1 Antibody (clone 10I3) at 2 ug/ml shows green IRS1-associated fluorescence distributed predominantly throughout the cytoplasm and around the blue DAPI-stained nuclei. Heat-induced epitope retrieval was performed by steaming the sample in pH 6 citrate buffer for 20 min. The cytoplasmic distribution is consistent with the role of IRS1 as an intracellular signaling adaptor and demonstrates cellular detection using this Insulin Receptor Substrate 1 Monoclonal Antibody.

Description

IRS1 Antibody 10I3 recognizes insulin receptor substrate 1 (IRS1), a cytoplasmic signaling adaptor that transmits signals from activated insulin and insulin-like growth factor receptors to downstream pathways. IRS1 does not possess intrinsic enzymatic activity. Instead, receptor-mediated tyrosine phosphorylation creates docking sites for signaling proteins containing SH2 domains, allowing IRS1 to organize multiprotein signaling complexes that connect extracellular growth and metabolic signals with intracellular responses.

IRS1 is an important mediator of insulin receptor signaling and contributes to activation of the PI3K-AKT and RAS-MAPK pathways. Through these signaling networks, IRS1 participates in glucose metabolism, protein and lipid synthesis, cell growth, survival, and differentiation. The activity of IRS1 is regulated by phosphorylation at numerous tyrosine, serine, and threonine residues, providing multiple mechanisms through which receptor signaling, nutrient availability, and cellular feedback pathways can modify its function.

Altered IRS1 signaling is extensively investigated in insulin resistance, diabetes, metabolic disease, and cancer biology. Changes in IRS1 abundance, phosphorylation, or degradation can influence cellular responsiveness to insulin and other growth factors. In malignant cells, IRS1-mediated signaling can contribute to pathways regulating proliferation, survival, metabolism, and therapeutic responses. Its position downstream of both insulin and insulin-like growth factor receptors makes IRS1 an important molecular connection between metabolic regulation and growth factor signaling.

Clone 10I3 is a mouse monoclonal antibody generated against recombinant human IRS1 corresponding to amino acids 1041-1242. This Insulin Receptor Substrate 1 Monoclonal Antibody provides a defined reagent for investigating IRS1 expression and complements antibodies directed toward other components of insulin and growth factor signaling pathways. NSJ Bioreagents supplies clone 10I3 for research use only.

An IRS1 Antibody can be used to investigate insulin receptor signaling, insulin-like growth factor signaling, PI3K-AKT and MAPK pathways, glucose metabolism, insulin resistance, cellular growth, and cancer biology.

Explore our Signal Transduction Antibodies page for additional antibodies targeting proteins involved in receptor-mediated signaling and intracellular signal transduction.

Application Notes

Optimal dilution of the IRS1 Antibody 10I3 / Insulin Receptor Substrate 1 Monoclonal Antibody should be determined by the researcher.

Immunogen

A human recombinant protein (amino acids S1041-Q1242) was used as the immunogen for the IRS1 Antibody 10I3.

Storage

After reconstitution, the IRS1 Antibody 10I3 can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

insulin receptor substrate 1 antibody, IRS-1 antibody, insulin receptor substrate-1 antibody, HIRS-1 antibody

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