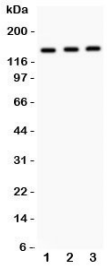
IRS-1 Polyclonal Antibody / Insulin Receptor Substrate 1 Polyclonal Antibody (R31636)

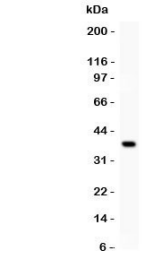
Catalog No.	Formulation	Size
R31636	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

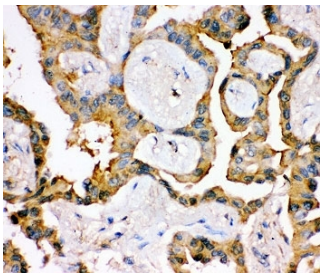
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
Gene ID	3667
Applications	Western blot: 0.5-1ug/ml IHC (FFPE): 0.5-1ug/ml
Limitations	This IRS-1 Polyclonal Antibody / Insulin Receptor Substrate 1 Polyclonal Antibody is available for research use only.



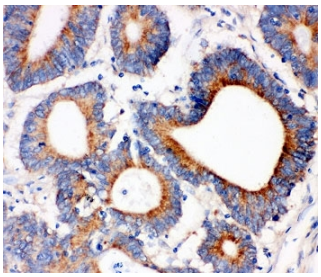
IRS-1 Polyclonal Antibody Detection in A549, MM453 and Jurkat Cells by WB. Western blot testing of human A549 (lane 1), MM453 (lane 2), and Jurkat (lane 3) cell lysates with IRS-1 Polyclonal Antibody shows strong, discrete high-molecular-weight bands in all three samples. The major signals migrate at approximately 150-160 kDa, within the reported 132-185 kDa range for IRS1 associated with differences in phosphorylation state. Relatively little additional reactivity is visible across the displayed molecular weight range. The consistent high-molecular-weight bands demonstrate detection of IRS1 in three human cell lines using this Insulin Receptor Substrate 1 Polyclonal Antibody.



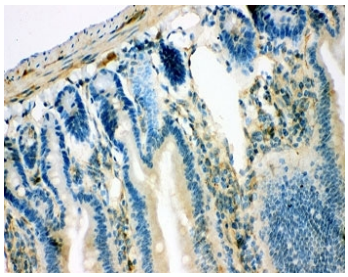
IRS-1 Polyclonal Antibody Detection of Recombinant Human IRS1 Protein by WB. Western blot testing of 0.5 ng recombinant human IRS1 protein with IRS-1 Polyclonal Antibody shows a strong, discrete band migrating at approximately 35-40 kDa. Because the recombinant protein represents a partial IRS1 construct rather than full-length endogenous protein, its migration should not be compared with the approximately 132-185 kDa range observed for cellular IRS1. The isolated signal demonstrates recognition of recombinant IRS1 antigen using this Insulin Receptor Substrate 1 Polyclonal Antibody.



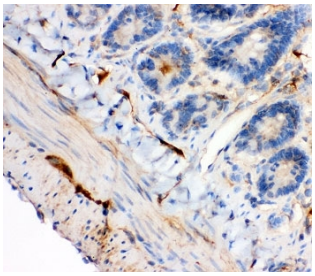
IRS-1 Polyclonal Antibody Staining in Human Lung Cancer by IHC. Immunohistochemistry staining of FFPE human lung cancer tissue with IRS-1 Polyclonal Antibody shows brown immunoreactivity within tumor cells, with predominantly cytoplasmic staining and heterogeneous signal intensity across the tissue. Numerous nuclei remain comparatively unstained. The cellular distribution is consistent with the role of IRS1 as an intracellular signaling adaptor and demonstrates detection of IRS1 in human lung cancer using this Insulin Receptor Substrate 1 Polyclonal Antibody.



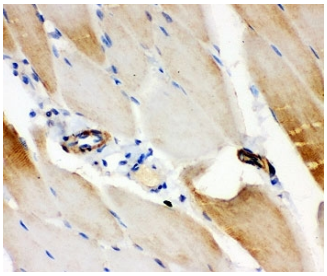
IRS-1 Polyclonal Antibody Staining in Human Intestinal Cancer by IHC. Immunohistochemistry staining of FFPE human intestinal cancer tissue with IRS-1 Polyclonal Antibody shows prominent brown immunoreactivity in malignant glandular epithelial cells. Staining is predominantly cytoplasmic and is especially evident along the epithelial cells surrounding glandular lumens, while much of the intervening stromal tissue shows weaker labeling. The distinct epithelial staining demonstrates detection of IRS1 in human intestinal cancer using this Insulin Receptor Substrate 1 Polyclonal Antibody.



IRS-1 Polyclonal Antibody Staining in Mouse Intestine by IHC. Immunohistochemistry staining of FFPE mouse intestine with IRS-1 Polyclonal Antibody shows brown immunoreactivity within the intestinal mucosa, with staining concentrated in epithelial cells and comparatively weak labeling in much of the surrounding tissue. The visible signal demonstrates cross-species detection of IRS1 in mouse intestinal tissue using this Insulin Receptor Substrate 1 Polyclonal Antibody.



IRS-1 Polyclonal Antibody Staining in Rat Intestine by IHC. Immunohistochemistry staining of FFPE rat intestine with IRS-1 Polyclonal Antibody shows heterogeneous brown immunoreactivity within intestinal tissue, including cytoplasmic labeling in epithelial and other cells surrounding glandular structures. Numerous nuclei remain negative, while staining intensity varies among cells and tissue regions. The observed labeling demonstrates detection of IRS1 in rat intestine using this Insulin Receptor Substrate 1 Polyclonal Antibody.



IRS-1 Polyclonal Antibody Staining in Rat Skeletal Muscle by IHC. Immunohistochemistry staining of FFPE rat skeletal muscle with IRS-1 Polyclonal Antibody shows brown cytoplasmic immunoreactivity within skeletal muscle fibers, with variable staining intensity across the field. Additional strong staining is visible in a small vascular-associated structure, while nuclei remain predominantly unstained. The muscle-fiber labeling demonstrates detection of IRS1 in rat skeletal muscle using this Insulin Receptor Substrate 1 Polyclonal Antibody.

Description

IRS-1 Polyclonal Antibody 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, phosphorylation of IRS1 creates docking sites for intracellular signaling proteins, enabling it to organize signaling complexes that connect receptor activation with metabolic and growth-related cellular responses.

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

Altered IRS1 expression and signaling are extensively investigated in insulin resistance, diabetes, metabolic disease, and cancer biology. Changes in IRS1 abundance, phosphorylation, localization, or degradation can influence cellular responsiveness to insulin and other growth factors. IRS1-mediated signaling is also studied in malignant cells because pathways downstream of this adaptor can affect proliferation, survival, metabolism, and responses to extracellular growth signals. Its position downstream of both insulin and insulin-like growth factor receptors connects IRS1 with metabolic as well as mitogenic signaling.

This Insulin Receptor Substrate 1 Polyclonal Antibody is a rabbit polyclonal generated against recombinant human IRS1 corresponding to amino acids 1041-1242. The antibody provides a polyclonal reagent for investigating IRS1 expression and complements monoclonal antibodies directed against this important component of insulin and growth factor signaling. NSJ Bioreagents supplies this antibody for research use only.

An IRS-1 Polyclonal 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.

For broader IRS1 validation across multiple tissues, cell lines, and applications, see our IRS1 Antibody 10I3 / Insulin Receptor Substrate 1 Monoclonal Antibody page.

Application Notes

Titration of the IRS-1 Polyclonal Antibody / Insulin Receptor Substrate 1 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 1041-1242) was used as the immunogen for this IRS-1 Polyclonal Antibody.

Storage

The lyophilized IRS-1 Polyclonal Antibody can be stored at 4oC to -20oC. After reconstitution, aliquot and store at -20oC. Avoid repeated freeze/thaws.

Alternate Names

IRS1 antibody, insulin receptor substrate 1 antibody, insulin receptor substrate-1 antibody, HIRS-1 antibody

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