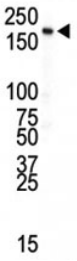
INSR Antibody / Insulin Receptor Polyclonal Antibody (F50643)

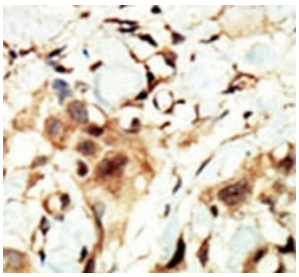
Catalog No.	Formulation	Size
F50643-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F50643-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P06213
Applications	Western blot: 1:1000 IHC (Paraffin): 1:50-1:100
Limitations	This INSR Antibody / Insulin Receptor Polyclonal Antibody is available for research use only.



INSR Antibody Detection in Human SKBR-3 Breast Cancer Cells by WB. Western blot testing of human SKBR-3 breast cancer cell lysate with INSR Antibody shows a prominent band migrating slightly above the 150 kDa molecular weight marker, consistent with the approximately 156 kDa insulin receptor precursor. No prominent band corresponding to the approximately 95 kDa processed beta subunit is evident in this preparation. The discrete high-molecular-weight signal demonstrates detection of full-length INSR precursor protein in SKBR-3 cells using this Insulin Receptor Polyclonal Antibody.



INSR Antibody Staining in Human Breast Carcinoma by IHC. Immunohistochemistry staining of FFPE human breast carcinoma using INSR Antibody shows brown immunoreactivity within carcinoma cells, with heterogeneous staining intensity across the tumor population. The visible labeling includes membranous and cytoplasmic staining, consistent with detection of the insulin receptor in the neoplastic cells. The staining demonstrates recognition of INSR in human breast carcinoma tissue sections using this Insulin Receptor Polyclonal Antibody.

Description

INSR Antibody recognizes the insulin receptor (INSR), a transmembrane receptor tyrosine kinase responsible for mediating many of the biological effects of insulin. INSR is synthesized as a single precursor protein that undergoes glycosylation and proteolytic processing to generate extracellular alpha and transmembrane beta subunits. The mature receptor is assembled as a disulfide-linked heterotetramer containing two alpha and two beta chains. The alpha subunits participate in ligand binding, while the beta subunits contain the intracellular tyrosine kinase domains that initiate receptor signaling.

Insulin binding induces conformational changes in INSR that activate its intrinsic kinase activity and promote phosphorylation of insulin receptor substrates and other signaling proteins. Major downstream pathways include PI3K-AKT and RAS-MAPK signaling, connecting receptor activation with glucose transport, glycogen synthesis, lipid and protein metabolism, cellular growth, and survival. Through these signaling networks, INSR plays an essential role in metabolic homeostasis and the coordination of cellular responses to circulating insulin.

Altered INSR expression or signaling is extensively investigated in metabolic disease and insulin resistance. Pathogenic variants affecting the receptor can cause inherited disorders of insulin action, including Donohue syndrome, Rabson-Mendenhall syndrome, and type A insulin resistance syndrome. INSR is also studied in cancer biology because signaling through the receptor can influence cellular proliferation, survival, metabolism, and nutrient utilization. Alternative splicing generates receptor isoforms with differences that can affect ligand interactions and signaling behavior.

This Insulin Receptor Polyclonal Antibody was generated against a peptide corresponding to amino acids 21-52 of human INSR, an N-terminal region of the receptor precursor. The antibody provides a polyclonal reagent for investigating insulin receptor expression and complements monoclonal antibodies used to study INSR and insulin-responsive signaling pathways. NSJ Bioreagents supplies this antibody for research use only.

An INSR Antibody can be used to investigate insulin receptor expression and its relationship to insulin signaling, glucose homeostasis, metabolic regulation, insulin resistance, receptor tyrosine kinase signaling, and disease biology.

For a monoclonal antibody with broader Western blot and immunofluorescence validation, see our Insulin Receptor Antibody GGA-9 / INSR Monoclonal Antibody page.

Application Notes

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

Immunogen

A portion of amino acids 21-52 from the human protein was used as the immunogen for this Insulin Receptor / INSR Antibody.

Storage

Aliquot the Insulin Receptor / INSR Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

insulin receptor antibody, insulin receptor polyclonal antibody, CD220 antibody, insulin receptor tyrosine kinase antibody

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