

DESCRIPTION

Species Reactivity	Human
Specificity	Detects Human Phospho-IRS1 (Y1179) in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG _{2A} Clone # 744353
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Phosphopeptide containing the human IRS1 Y1179 site
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below

DATA

<p>Western Blot</p> <p>Detection of Human Phospho-IRS1 (Y1179) by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line untreated (-) or treated (+) with 1 µg/mL Insulin for 5 minutes and 300 U/mL CIP for 1 hour. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human Phospho-IRS1 (Y1179) Monoclonal Antibody (Catalog # MAB7455) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Phospho-IRS1 (Y1179) at approximately 150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p> <p>Phospho-IRS1 (Y1179) in MCF-7 Human Cell Line. IRS1 phosphorylated at Y1179 was detected in immersion fixed MCF-7 human breast cancer cell line using Mouse Anti-Human Phospho-IRS1 (Y1179) Monoclonal Antibody (Catalog # MAB7455) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human IRS1 (insulin receptor substrate 1) is a 160-180 kDa substrate intermediate between the insulin and IGF-I receptor, and downstream signaling modulators. Upon insulin/IGF-I receptor activation, IRS1 is tyrosine phosphorylated, allowing its association with PI-3 kinase and GRB2. Human IRS1 is 1242 amino acids (aa) in length. It contains a PH (pleckstrin homology) domain (aa 12-115), followed by a PTB (phosphotyrosine-binding) domain (aa 160-263) and ten PEST (Pro/Glu/Ser/Thr) regions (aa 340-1225). IRS1 may be proteolytically cleaved at Arg656-Val657, generating a 90 kDa and 79 kDa fragment. Insulin receptor-mediated phosphorylation of human IRS1 on Y1179, or its murine equivalent, Y1172, mediates IRS-1 interaction with SH2 domains such as that of the Src family kinase, Fyn, or the tyrosine phosphatase, SHP-2.