

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human IGF-I R/IGF1R in sandwich ELISAs and Western blots. Detects mouse IGF-I R/IGF1R in Immunohistochemistry. In sandwich immunoassays, less than 0.15% cross-reactivity or interference was observed with recombinant human (rh) IGF-I, rhIGF-II, rhIL-3 R α , rhIL-9 R, and rhTGF- β RII.
Source	Monoclonal Mouse IgG ₁ Clone # 33255
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IGF-I R/IGF1R Glu31-Asn932 Accession # P08069
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μ m filtered solution in PBS.

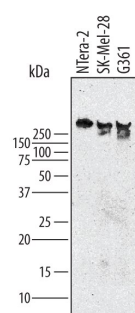
APPLICATIONS

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 μ g/mL	See Below
Flow Cytometry	0.25 μ g/10 ⁶ cells	See Below
Immunocytochemistry	3-25 μ g/mL	See Below
Immunohistochemistry	5-25 μ g/mL	See Below
Human IGF-I R/IGF1R Sandwich Immunoassay		Reagent
ELISA Capture	2-8 μ g/mL	Human/Mouse IGF-I R/IGF1R Antibody (Catalog # MAB391)
ELISA Detection	0.1-0.4 μ g/mL	Human IGF-I R/IGF1R Biotinylated Antibody (Catalog # BAF391)
Standard		Recombinant Human IGF-I R/IGF1R (Catalog # 391-GR)
Neutralization	Measured by its ability to neutralize IGF-I-induced proliferation in the MCF-7 human breast cancer cell line. Karey, K.P. <i>et al.</i> (1988) <i>Cancer Research</i> 48 :4083. At 11 μ g/mL, this antibody will neutralize approximately 50-75% of the bioactivity due to 6 ng/mL Recombinant Human IGF-I.	

DATA

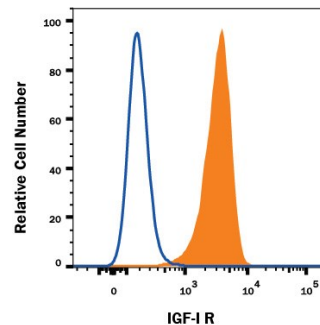
Western Blot



Detection of Human IGF-I R/IGF1R by Western Blot.

Western blot shows lysates of Ntera-2 human testicular embryonic carcinoma cell line, SK-Mel-28 human malignant melanoma cell line, and G361 human melanoma cell line. PVDF membrane was probed with 1 μ g/mL of Mouse Anti-Human/Mouse IGF-I R/IGF1R Monoclonal Antibody (Catalog # MAB391) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for IGF-I R/IGF1R at approximately 275 kDa (as indicated). This experiment was conducted under non-reducing conditions and using Immunoblot Buffer Group 2.

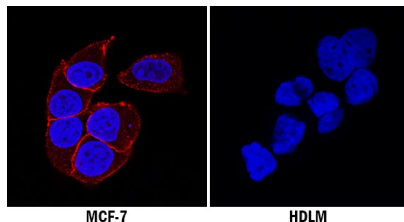
Flow Cytometry



Detection of IGF-I R/IGF1R in MCF-7 Human Cell Line by Flow Cytometry.

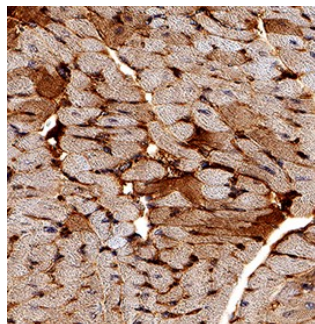
MCF-7 human breast cancer cell line was stained with Mouse Anti-Human IGF-I R/IGF1R Monoclonal Antibody (Catalog # MAB391, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram) followed by anti-mouse IgG PE-conjugated secondary antibody (Catalog # F0102B). View our protocol for [Staining Membrane-associated Proteins](#).

Immunocytochemistry



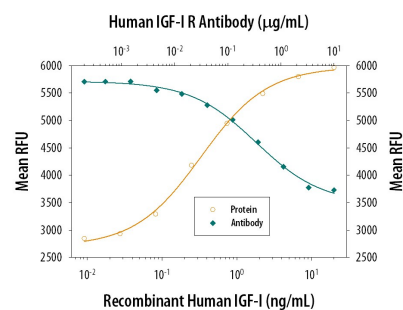
IGF-I R/IGF1R in MCF-7 and HDLM Human Cell Lines. IGF-I R/IGF1R was detected in immersion fixed MCF-7 human breast cancer cell line (positive staining; left panel) and HDLM human Hodgkin's lymphoma cell line (negative staining; right panel) using Mouse Anti-Human/Mouse IGF-I R/IGF1R Monoclonal Antibody (Catalog # MAB391) at 3 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 cell membrane in MCF-7 cell line. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunohistochemistry



IGF-I R/IGF1R in Mouse Heart. IGF-I R/IGF1R was detected in perfusion fixed paraffin-embedded sections of mouse heart using Mouse Anti-Human/Mouse IGF-I R/IGF1R Monoclonal Antibody (Catalog # MAB391) at 15 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to plasma membrane and cytoplasm. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

Neutralization



Cell Proliferation Induced by IGF-I and Neutralization by Human IGF-I R/IGF1R Antibody. Recombinant Human (rh) IGF-I/IGF-1 (Catalog # 291-G1) stimulates proliferation in the MCF-7 human breast cancer cell line in a dose-dependent manner (orange line). Proliferation elicited by rhIGF-I/IGF-1 (6 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human/Mouse IGF-I R/IGF1R Monoclonal Antibody (Catalog # MAB391). At 11 µg/mL, this antibody will neutralize 50-75% rhIGF-1 induced activity.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 0.5 mg/mL in sterile PBS.

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.

- 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

Insulin-like growth factor I receptor (IGF-I R) is a disulfide-linked heterotetrameric transmembrane protein consisting of two α and two β subunits. Both the α and β subunits are encoded within a single receptor precursor cDNA. The proreceptor polypeptide is proteolytically cleaved and disulfide-linked to yield the mature heterotetrameric receptor. The α subunit of IGF-I R is extracellular while the β subunit has an extracellular domain, a transmembrane domain and a cytoplasmic tyrosine kinase domain. IGF-I R is highly expressed in all cell types and tissues. Essentially all of the biological activities of IGF-I and -II have been shown to be mediated via IGF-I R.