

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IGF-I/IGF-1 in direct ELISAs.
Source	Monoclonal Rat IgG ₁ Clone # 997211
Purification	Protein A or G purified from ascites
Immunogen	<i>E. coli</i> -derived recombinant human IGF-I/IGF-1 Gly49-Ala118 Accession # P05019
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

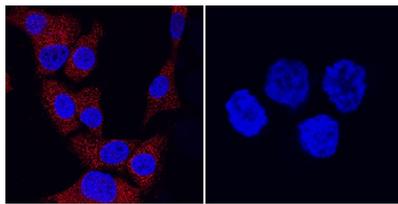
APPLICATIONS

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
Immunocytochemistry	8-25 µg/mL	See Below

DATA

Immunocytochemistry



MDA-MB-231

PC-3

IGF-I/IGF-1 in MDA-MB-231 and PC-3 Human Cell Lines.
IGF-I/IGF-1 was detected in immersion fixed MDA-MB-123 human breast cancer cell line (left panel, positive stain) and PC-3 human prostate cancer cell line (right panel, negative stain) using Rat Anti-Human IGF-I/IGF-1 Monoclonal Antibody (Catalog # MAB2913) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

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. <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

Insulin-like growth factor I, also known as somatomedin C, is the dominant effector of growth hormone and is structurally homologous to proinsulin. Human IGF-I is synthesized as two precursor isoforms with N- and alternate C-terminal propeptides (1). These isoforms are differentially expressed by various tissues (1). The 7.6 kDa mature IGF-I is identical between isoforms and is generated by proteolytic removal of the N- and C-terminal regions. Mature human IGF-I shares 94% and 96% aa sequence identity with mouse and rat IGF-I, respectively (2), and exhibits cross-species activity. It shares 64% aa sequence identity with mature human IGF-II. Circulating IGF-I is produced by hepatocytes, while local IGF-I is produced by many other tissues in which it has paracrine effects (1). IGF-I induces the proliferation, migration, and differentiation of a wide variety of cell types during development and postnatally (3). IGF-I regulates glucose and fatty acid metabolism, steroid hormone activity, and cartilage and bone metabolism (4-7). It plays an important role in muscle regeneration and tumor progression (1, 8). IGF-I binds IGF-I R, IGF-II R, and the insulin receptor, although its effects are mediated primarily by IGF-I R (9). IGF-I association with IGF binding proteins increases its plasma half-life and modulates its interactions with receptors (10).

References:

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5. Bluher, S. *et al.* (2005) *Best Pract. Res. Clin. Endocrinol. Metab.* **19**:577.
6. Garcia-Segura, L.M. *et al.* (2006) *Neuroendocrinology* **84**:275.
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