Human IGF-I/IGF-1 Antibody

Monoclonal Rat IgG_{2A} Clone # 997121

Catalog Number: MAB2912

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IGF-I/IGF-1 in direct ELISAs.
Source	Monoclonal Rat IgG_{2A} Clone # 997121
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human IGF-I/IGF-1 Gly49-Ala118 Accession # P05019
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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.

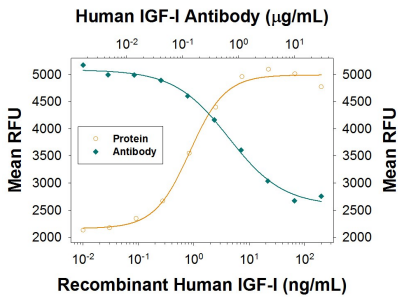
APPLICATIONS

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.*

Neutralization	Measured by its ability to neutralize IGF-I/IGF-1-induced proliferation in the MCF-7 human breast cancer cell line. Karey, K.P. *et al.* (1988) Cancer Research **48**:4083. The Neutralization Dose (ND_{50}) is typically 0.1-0.8 µg/mL in the presence of 10 ng/mL Recombinant Human IGF-I/IGF-1.

DATA

Neutralization



Cell Proliferation Induced by IGF-I/IGF-1 and Neutralization by Human IGF-I/IGF-1 Antibody. Recombinant Human 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), as measured by Resazurin (Catalog # AR002). Proliferation elicited by Recombinant Human IGF-I/IGF-1 (10 ng/mL) is neutralized (green line) by increasing concentrations of Rat Anti-Human IGF-I/IGF-1 Monoclonal Antibody (Catalog # MAB2912). The ND_{50} is typically 0.1-0.8 µg/mL.

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.

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Human IGF-I/IGF-1 Antibody

Monoclonal Rat IgG_{2A} Clone # 997121

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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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