

DESCRIPTION

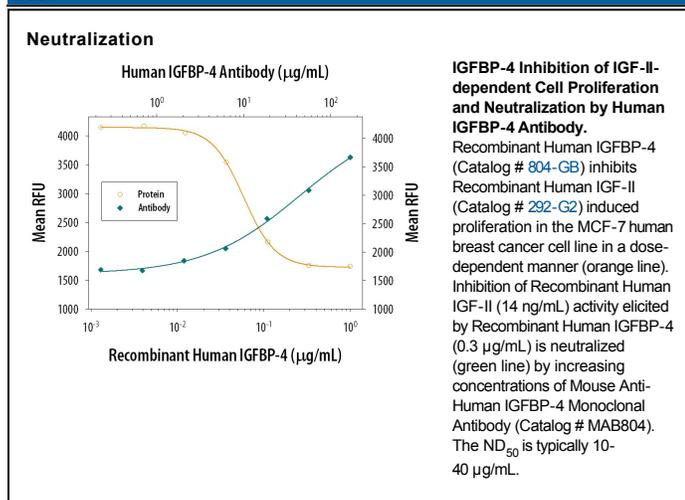
Species Reactivity	Human
Specificity	Detects human IGFBP-4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) IGFBP-1, rhIGFBP-2, or rhIGFBP-3 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 82334
Purification	Protein A or G purified from ascites
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IGFBP-4 Asp22-Glu258 Accession # AAA62670
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 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 IGFBP-4 inhibition of IGF-II-dependent proliferation in the MCF-7 human breast cancer cell line. Karey, K. P. <i>et al.</i> (1988) <i>Cancer Research</i> 48 :4083. The Neutralization Dose (ND ₅₀) is typically 10–40 µg/mL in the presence of 0.3 µg/mL Recombinant Human IGFBP-4 and 14 ng/mL Recombinant Human IGF-II.
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DATA



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

Human IGF binding protein 4 (IGFBP-4) was isolated from human plasma based on its ability to bind immobilized IGF-I. Human IGFBP-4 cDNA encodes a 258 amino acid (aa) precursor protein with a predicted 21 aa signal peptide that is processed to generate the 237 aa mature human IGFBP-4. The human IGFBP-4 contains a potential N-linked glycosylation site and shares approximately 90% aa sequence identity with both the mouse and rat IGFBP-4. According to the nomenclature of IGFBPs defined at the 4th International Symposium of IGFs (1997, Tokyo), six high-affinity IGF binding proteins (IGFBP-1, -2, -3, -4, -5, -6) and four IGFBP-related proteins (IGFBPr-1, -2, -3, -4) have been identified. All IGFBPs have a high cysteine content and share conserved cysteine residues that are clustered in the amino- and carboxy-terminal third of the molecule. IGFBPs have been shown to either inhibit or enhance the biological activities of IGF, or act in an IGF-independent manner. Post-translational modification of IGFBPs, including phosphorylation and proteolysis, have been shown to modify the affinities of the binding proteins for IGF and may indirectly regulate IGF actions.

References:

1. Jones, J. I. and D.R. Clemons (1995) *Endocrine Rev.* **16**:3.
2. Kelly, K.M. *et al.* (1996) *Intl. J. Biochem. Cell Biol.* **28**:619.
3. Kim, H-S. *et al.* (1997) *Proc. Natl. Acad. Sci. USA* **94**:12981.