Human IGFBP-4 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF804

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IGFBP-4 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse IGFBP-4 is observed, and less than 1% cross-reactivity with recombinant human (rh) IGFBP-1, rhIGFBP-2, rhIGFBP-3, rhIGFBP-5 and rhIGFBP-6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

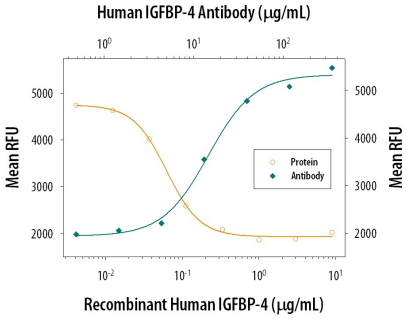
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human IGFBP-4 (Catalog # 804-GB)
Immunohistochemistry	5-15 µg/mL	See Below
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. *et al.* (1988) Cancer Research **48**:4083. The Neutralization Dose (ND_{50}) is typically 12-60 µg/mL in the presence of 0.3 µg/mL Recombinant Human IGFBP-4 and 14 ng/mL Recombinant Human IGF-II.	

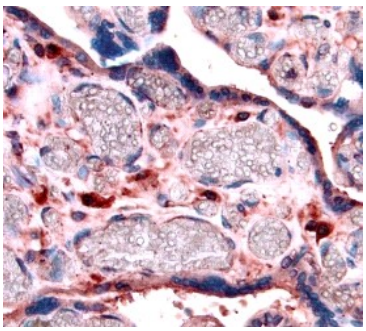
DATA

Neutralization



IGFBP-4 Inhibition of IGF-II-dependent Cell Proliferation and Neutralization by Human IGFBP-4 Antibody. Recombinant Human IGFBP-4 (Catalog # 804-GB) inhibits Recombinant Human IGF-II (Catalog # 292-G2) induced proliferation in the MCF-7 human breast cancer cell line in a dose-dependent manner (orange line). Inhibition of Recombinant Human IGF-II (14 ng/mL) activity elicited by Recombinant Human IGFBP-4 (0.3 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IGFBP-4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF804). The ND_{50} is typically 12-60 µg/mL.

Immunohistochemistry



IGFBP-4 in Human Placenta. IGFBP-4 was detected in immersion fixed paraffin-embedded sections of human placenta (chorionic villi) using 5 µg/mL Goat Anti-Human IGFBP-4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF804) overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained with the Anti-Goat HRP-AEC Cell & Tissue Staining Kit (red; Catalog # CTS009) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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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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) residue precursor protein with a predicted 21 aa residue signal peptide that is processed to generate the 237 aa residue mature human IGFBP-4. The human IGFBP-4 contains a potential N-linked glycosylation site and shares approximately 90% amino acid 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.

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