

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IGFBP-3 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross reactivity with recombinant mouse IGFBP-3 is observed, and less than 1% cross-reactivity with recombinant human (rh) IGFBP-1, rhIGFBP-2, and rhIGFBP-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IGFBP-3 Gly28-Lys291 Accession # CAA46087
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.

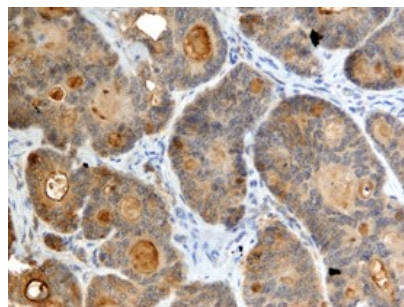
APPLICATIONS

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-3 (Catalog # 675-B3)
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize IGFBP-3 inhibition of IGF-II-dependent proliferation in the MCF-7 human breast cancer cell line [Karey, K.P. <i>et al.</i> (1988) Cancer Research 48 :4083]. The Neutralization Dose (ND ₅₀) is typically 0.75-3.0 µg/mL in the presence of 0.2 µg/mL Recombinant Human IGFBP-3 and 14 ng/mL Recombinant Human IGF-II.	

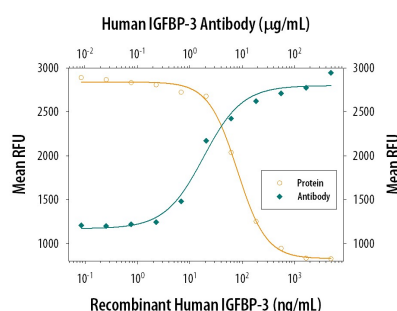
DATA

Immunohistochemistry



IGFBP-3 in Human Colon. IGFBP-3 was detected in immersion fixed paraffin-embedded sections of human colon using 10 µg/mL Human IGFBP-3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF675) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Neutralization



IGFBP-3 Inhibition of IGF-II-dependent Cell Proliferation and Neutralization by Human IGFBP-3 Antibody. Recombinant Human IGFBP-3 (Catalog # [675-B3](#)) 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-3 (0.2 µg/mL) is neutralized (green line) by increasing concentrations of Human IGFBP-3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF675). The ND₅₀ is typically 0.75-3.0 µg/mL.

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. <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

The superfamily of insulin-like growth factor (IGF) binding proteins include the six high-affinity IGF binding proteins (IGFBP) and at least four additional low-affinity binding proteins referred to as IGFBP related proteins (IGFBP-rP). All IGFBP superfamily members are cysteine-rich proteins with conserved cysteine residues, which are clustered in the amino- and carboxy-terminal thirds of the molecule. IGFBPs modulate the biological activities of IGF proteins. Some IGFBPs may also have intrinsic bioactivity that is independent of their ability to bind IGF proteins. Post-translational modifications of IGFBPs, including glycosylation, phosphorylation and proteolysis, have been shown to modify the affinities of the binding proteins to IGF.

Human IGFBP-3 cDNA encodes a 291 amino acid (aa) residue precursor protein with a putative 27 aa residue signal peptide that is processed to generate the 264 aa residue mature protein with three potential N-linked and two potential O-linked glycosylation sites. Human IGFBP-3 is expressed in multiple tissues. The highest expression level is found in the non-paranchymal cells of the liver. Expression levels are also higher during extrauterine life and peak during puberty. Human IGFBP-3 is the major IGF binding protein in plasma where it exists in a ternary complex with IGF-I or IGF-II and the acid-labile subunit (ALS).

References:

1. Jones, J.I. and D.R. Clemmons (1995) *Endocrine Rev.* **16**:3.
2. Kelley, K.M. *et al.* (1996) *Int. J. Biochem. Cell Biol.* **28**:619.
3. Spagnoli, A. and R.G. Rosenfeld (1997) *Curr. Op. Endocrinology and Diabetes* **4**:1.