Human IGFBP-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF871

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IGFBP-1 in direct ELISAs and Western blots. In these formats, less than 2% cross-reactivity with recombinant human (rh) IGFBP-2, rhIGFBP-3, rhIGFBP-4, and rhIGFBP-5 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human IGFBP-1 Ala26-Asn259 Accession # P08833
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

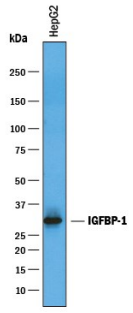
APPLICATIONS

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	1 µg/mL	See Below
Simple Western	50 µg/mL	See Below

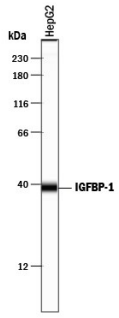
DATA

Western Blot



Detection of Human IGFBP-1 by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human IGFBP-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF871) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # Catalog # HAF019). A specific band was detected for IGFBP-1 at approximately 28 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Human IGFBP-1 by Simple Western™. Simple Western lane view shows lysates of HepG2 human hepatocellular carcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for IGFBP-1 at approximately 39 kDa (as indicated) using 50 µg/mL of Goat Anti-Human IGFBP-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF871) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

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.
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.

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-transitional modifications of IGFBP, including glycosylation, phosphorylation and proteolysis, have been shown to modify the affinities of the binding proteins to IGF.

Human IGFBP-1 cDNA encodes a 259 amino acid (aa) residue precursor protein with a putative 25 aa residue signal peptide that is processed to generate the 234 aa residue mature protein. IGFBP-1 contains an integrin receptor recognition sequence (RGD sequence) but lacks potential N-linked glycosylation sites. IGFBP-1 is expressed in liver, decidua, kidneys and is the most abundant IGFBP in amniotic fluid. Serum levels of IGFBP-1 are lowest after meals. Hepatocyte production of IGFBP-1 is regulated at the transcriptional level due to the affects of insulin and corticosteriods. IGFBP-1 binds equally well to IGF-I and IGF-II, with phosphorylated forms of IGFBP-1 exhibiting higher binding affinities.

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.

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