Human IGFBP-rp1/IGFBP-7 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1334

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IGFBP-rp1 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) IGFBP-L1, rhIGFBP-rp10 and recombinant mouse IGFBP-7 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IGFBP-rp1 Arg98-Arg277 Accession # AAA16187
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.

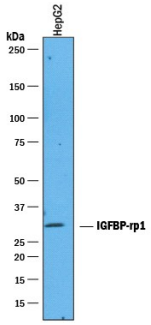
APPLICATIONS

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	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

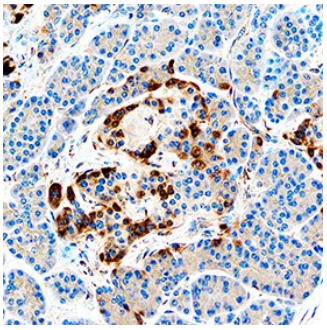
DATA

Western Blot



Detection of Human IGFBP-rp1/IGFBP-7 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-rp1/IGFBP-7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1334) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for IGFBP-rp1/IGFBP-7 at approximately 30 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



IGFBP-rp1/IGFBP-7 in Human Pancreas. IGFBP-rp1/IGFBP-7 was detected in immersion fixed paraffin-embedded sections of human pancreas using Goat Anti-Human IGFBP-rp1/IGFBP-7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1334) at 0.3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to islets. 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.

BACKGROUND

IGFBP-rp1, also known as Mac25/Angiomodulin (AGM), tumor-derived adhesion factor (TAF) and prostacyclin-stimulating factor (PSF), is a secreted protein that contains three protein domain modules. Human IGFBP-rp1 cDNA encodes 282 amino acid (aa) residue precursor protein with a putative 26 aa signal peptide. Mature IGFBP-rp1 is a glycosylated protein with an N-terminal IGFBP domain, followed by a Kazal-type serine proteinase inhibitor domain and a C-terminal immunoglobulin-like C2-type domain. The similarity of IGFBP-rp1 with the IGFBPs is confined to the N-terminal IGFBP domain, which contains all 12 of the conserved cysteine residues found in IGFBP-1 through 5. Human and mouse IGFBP-rp1 are highly homologous. Discounting a segment of 43 aa near the N-terminus that is missing in the mouse homologue, human and mouse IGFBP-rp1 share 94% aa sequence identity. IGFBP-rp1 is expressed in many normal tissues and in cancer cells. It is abundantly expressed in high endothelial venules (HEVs) of blood vessels in the secondary lymphoid tissues. The expression of IGFBP-rp1 is upregulated in senescing epithelial cells and by retinoic acid. IGFBP-rp1 binds IGF and insulin with very low affinity and has been shown to enhance the mitogenic actions of IGF and insulin. IGFBP-rp1 also has IGF/insulin-independent activities. It interacts with heparan sulfate proteoglycans, type IV collagen, and specific chemokines. IGFBP-rp1 supports weak cell adhesion, promotes cell spreading on type IV collagen, and stimulates the production of the potent vasodilator PGI_2. It modulates tumor cell growth and has also been implicated in angiogenesis. IGFBP-rp1 is proteolytically cleaved between lysine 97 and alanine 98. Cleaved IGFBP-rp1 has enhanced cell attachment activity but can no longer bind IGF/insulin (1-3).

References:

1. Hwa, V. *et al.* (1999) Endocrinology Rev. **20**:761.
2. Nagakubo, D. *et al.* (2003) J. Immunol. **171**:553.
3. Ahmed, S. *et al.* (2003) Biochem. Biophys. Res. Commun. **310**:612.

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