

Product Specification Sheet

Anti-Human IGFBP-7 Antiserum and controls

Cat. # IGFBP72-M	Mouse Anti-Human IGFBP-7 protein IgG	Size: 100 ug
Cat. # IGFBP71-C	Recombinant purified human IGFBP-7 protein control for WB	Size: 100 ul

Unlike insulin, both IGF-I and IGF-II circulate in plasma tightly bound to specific binding proteins. Two major forms of IGF-binding proteins have been identified in human plasma, a low molecular weight form and a high molecular weight form. The low molecular weight IGF-binding protein (IGFBP1) is synthesized in liver, secretory endometrium, and decidua. It binds both IGF I and IGF II with high affinity. Insulin-like growth factor binding protein-1 (IGFBP-1 ~30-kda; also known as IBP1 or placental protein 12, or IGF-BP25; chromosome 7p14-p12) is a member of the superfamily of insulin-like growth factor (IGF) binding proteins which include six high-affinity IGF binding proteins (IGFBP1-6) and at least four low-affinity binding proteins referred to as IGFBP related proteins (IGFBP-rP). The IGFBP members are cysteine-rich proteins with conserved cysteine residues, clustered in the amino-terminal and the carboxy-terminal regions of the molecule. Contained within IGFBP-1 and -2 is an integrin receptor recognition sequence (RGD) that is responsible for promoting cell migration by an IGF-independent action. IGFBPs hold a central position in IGF ligand-receptor interactions through influences on both the bioavailability and distribution of IGFs in the extracellular environment. IGFBPs will either inhibit or enhance the biological activities of IGF or act in an IGF-independent manner.

IGF-BP7 is expressed in a wide range of normal human tissues and it generally shows reduced expression in cancer cell lines of prostate, breast, colon, and lung origin. It plays a role in skeletal myogenesis by binding to IGF in a manner that inhibits IGF induced differentiation of skeletal myoblasts, without affecting IGF induced proliferation. Additionally, IGF-BP7 suppresses growth and colony formation of prostate and breast cancer cell lines through an IGF independent mechanism, which causes a delay in the G1 phase of the cell cycle, and increased apoptosis. Recombinant human IGF-BP7 is a 26.4 kDa protein consisting of 257 amino acid residues. IGFBP-RP1 is closely related to CTGF (IGFBP-8), NOV (IGFBP-9) and CYR61 (IGFBP-10). The four proteins constitute a subfamily of low-affinity IGFBPs.

Protein name: Insulin-like growth factor-binding protein 7
Synonyms: IGFBP-7, IBP-7, IGF-binding protein 7, MAC25 protein, Prostacyclin-stimulating factor, PGI2-stimulating factor, IGFBP-rP1, MAC25, PSF
Gene name Name: IGFBP7
FUNCTION: Binds IGF-I and IGF-II with a relatively low affinity. Stimulates prostacyclin (PGI2) production.
SUBCELLULAR LOCATION: Secreted. PTM: N-glycosylated.

Source of Antigen and Antibodies

Antigen	Recombinant purified Human IGFBP-7/IGFBP-rp1 protein
Ab Host/type	mouse, monoclonal IgG1 purified over antigen column (cat # IGFBP72-M)
2-ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Cat # IGFBP71-C

Human IGFBP-7 (257aa ~27 kda) was expressed in E. coli and purified (>95%). For Western blot +ve control (**Cat # IGFBP71-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **IGFBP71-C** for good visibility with rabbit antibody Cat # **IGFBP72-M**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **IGFBP71-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Purified IgG
 solution lyophilized powder
 Buffer: PBS, 1% Trehalose
Reconstitute powder in 100 ul PBS

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.
Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Recommended Usage

Western Blotting (1-3 ug/ml) using ECL technique).

ELISA: Control antigen can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested.

Specificity & Cross-reactivity

Anti-IGFBP-7 antiserum reacts with human IGFBP-7. Antibody cross-reactivity in various species has not been studied. Recombinant purified human IGFBP-7 (#IGFBP71-C) is available as a control for Western.

General References: Alitalo T et al (1989) Human Genet. 83, 335-338; Ballard FJ et al (1990) J. Clin. Endocrinol. Metabol. 70, 817-818; Brewer MT et al (1988) BBRC 152, 1289-1297; Brinkman A et al (1988) EMBO J. 7, 2417-2423; Brinkman A et al (1988) BBRC 157, 898-907

*This product is for In vitro research use only.

Related material available from ADI

Human IGFBP-1 ELISA kits and antibodies for IGFBP1-6
 Human IGFBP-6 antibodies and recombinant proteins
 IGFBP72-S-C 80312A

India Contact:

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
 Email: customerservice@lifetechindia.com Website: www.lifetechindia.com