

## Product Specification Sheet

### Recombinant mouse Insulin Binding Protein 7 (IGFBP-7) Protein

**Cat.** IGFBP76-R-10      Recombinant mouse Insulin Like Growth Factor Binding Protein-7 (IGFBP-7) protein  
**SIZE:** 10 ug

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

**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.  
**SUBUNIT:** May interact with VPS24/CHMP3; the relevance of such interaction however remains unclear.  
**SUBCELLULAR LOCATION:** Secreted. PTM: N-glycosylated.

### Source of Antigen and Antibodies

Mouse IGFBP-7 (28-281aa) was expressed in Sf21 cells as human CD33-His tag at the n-terminus and purified (>95%, mol wt 35 kda). It is supplied lyophilized in PBS (see lot sp concn on the vial). Working dilution should be made in PBS, pH 7.4 containing 0.1% BSA or HSA (free from IGFII) at 10 ug/ml or higher.

IGFBP protein is stable for at least 6-months at -20oC or below. Store reconstituted protein in suitable size aliquots at -20oC or below for up to 3-months without significant loss of activity.

**Endotoxin level:** Purified mouse IGFBP-7 has very low Endotoxin level (<1 EU/ug protein).

**Biological activity:** Measured by its ability to bind rh6Ckine/CCL21.

### **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.

**Shipping:** 4oC for solutions and room temp for powder.

**General References:** (1) Kiefer MC (1991) BBRC 176, 219-225; Shimasaki S (1991) JBC 266, 10646-10653; Address DL (1991) BBRC 176, 213-218; Kalus WE (1998) EMBO J 17, 6558-6572

\*This product is for in vitro research use only.

### **Related items**

IGFBP-1-7 antibodies, IGFBP-1 ELISA kit  
IGFBP1-7 recombinant proteins

IGFBP76-R-10      80328A

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