

**DESCRIPTION**

**Source** *E. coli*-derived human IGFBP-rp1/IGFBP-7 protein  
Ser27-Leu282  
Accession # Q16270

**N-terminal Sequence Analysis** Ser27

**Predicted Molecular Mass** 26 kDa

**SPECIFICATIONS**

**SDS-PAGE** 29-34 kDa, under reducing conditions

**Activity** Measured by its binding ability in a functional ELISA.  
When Recombinant Human IGFBP-rp1/IGFBP-7 is used at 500 ng/mL (100 µL/well), the concentration of Recombinant Human CCL21/6Ckine (Catalog # 366-6C) that produces 50% optimal binding response is 2-12 ng/mL.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 500 µg/mL in PBS.

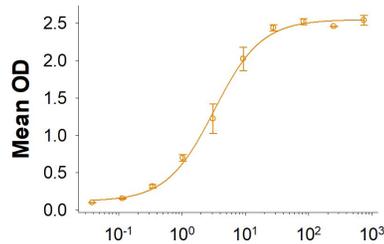
**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**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.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**DATA**

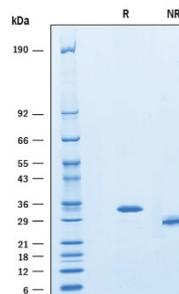
**Binding Activity**



**Recombinant Human CCL21/6Ckine (ng/mL)**

When Recombinant Human IGFBP-rp1/IGFBP-7 (Catalog # 10163-B7) is used at 500 ng/mL, 100 µL/well, Recombinant Human CCL21/6Ckine (Catalog # 366-6C) binds with an ED<sub>50</sub> of 2-12 ng/mL.

**SDS-PAGE**



2 µg/lane of Recombinant Human IGFBP-rp1/IGFBP-7 (Catalog # 10163-B7) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing major bands at 29-34 kDa and 25-30 kDa, respectively.

**BACKGROUND**

IGFBP-rp1, also known as IGFBP-7, 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 IGFBP1 through 5. Human and mouse IGFBP-rp1 are highly homologous. 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 up-regulated 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<sub>2</sub>. 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.