Recombinant Human IGFBP-rp1/IGFBP-7

Catalog Number: 1334-B7

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Asp30-Leu282, with an N-terminal 10-His tag Accession # Q16270
N-terminal Sequence Analysis	His
Predicted Molecular Mass	27.5 kDa

SPECIFICATIONS

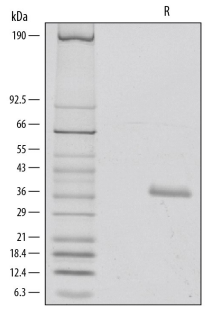
SDS-PAGE	36 kDa, reducing conditions
Activity	Measured by its ability to bind 6Ckine/CCL21 in a functional ELISA. Nagakubo, D. *et al.* (2003) J. Immunol. **171**:553. When Recombinant Human (rh) IGFBP-rp1/IGFBP-7 is immobilized at 500 ng/mL (100 µL/well), the concentration of Recombinant Human CCL21/6Ckine (Catalog # 366-6C) that produces 50% optimal binding response is found to be approximately 4-20 ng/mL.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/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. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

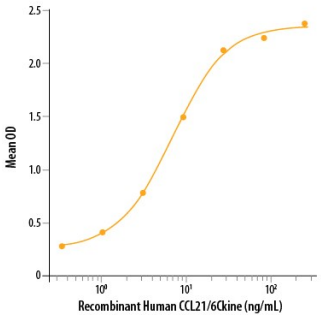
DATA

SDS-PAGE



1 µg/lane of Recombinant Human IGFBP-rp1/IGFBP-7 was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a single band at 36 kDa.

Binding Activity



Recombinant Human IGFBP-rp1/IGFBP-7 (Catalog # 1334-B7) binds Recombinant CCL21/6Ckine in a functional ELISA. When Recombinant Human IGFBP-rp1/IGFBP-7 is immobilized at 500 ng/mL (100 µL/well), the concentration of Recombinant Human CCL21/6Ckine (Catalog # 366-6C) that produces 50% of the optimal binding response is approximately 4-20 ng/mL.

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 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 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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956