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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human IGFBP6 Protein  
**Catalog Number:** hRP-0823  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Insulin-like growth factor binding proteins (IGFBP) 1–6 bind IGFs with high affinity in extracellular fluids and regulate IGF actions at target tissues. Some IGFBPs also possess distinct biological actions that are independent of IGFs. IGFBP6 is unique among the six IGFBPs because of its 50-fold greater affinity for IGF-II, making it a relatively specific inhibitor of IGF-II actions. Recent studies suggest that IGFBP-6 is a tumor suppressor that inhibits the growth of a number of IGF-II-dependent tumors. In addition to its ability to bind and sequester IGF-II, recent *in vitro* studies suggest that IGFBP-6 also has IGF-independent actions such as responding to hypoxia induction for inhibiting vascular endothelial cells angiogenesis *in vitro*.

Full-length human IGFBP6 (28-340 aa) gene was constructed with 15 aa N-terminal T7 tag and expressed in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** IGFBP6  
**Accession Number:** NP\_002169  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 0.2 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

### Key References

Zhang, C., et al., *IGF binding protein-6 expression in vascular endothelial cells is induced by hypoxia and plays a negative role in tumor angiogenesis*. *Int. J. Cancer* 130 (9), 2003-2012 (2012)



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Qiu,J., et al., *Insulin-like growth factor binding protein-6 interacts with the thyroid hormone receptor alpha1 and modulates the thyroid hormone-response in osteoblastic differentiation.* Mol. Cell. Biochem. 361 (1-2), 197-208 (2012)

Ahmad,W., et al., *Serine 204 phosphorylation and O-beta-GlcNAC interplay of IGFBP-6 as therapeutic indicator to regulate IGF-II functions in viral mediated hepatocellular carcinoma.* Virol. J. 8, 208 (2011)

## **Applications**

1. As soluble / native protein, may be used for studying IGF-II / HIF mediated VECs angiogenesis regulation in vitro.
2. May be used for mapping IGFBP6 protein-protein interaction.
3. May be used as antigen for specific antibody development.

## **Quality Control**

1. Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MASMTGGQQMGRGEFRCPGCGQGVQAGCPGGCVVEEDGGSPAEGCAEAEGLRREGQECGVYTP  
NCAPGLQCHPPKDDDEAPLRALLLGRGRCLPARAPAVAEENPKESKPQAGTARPDVNRRDQQRN  
PGTSTTPSQPNSAGVQDTEMGPCRRHLDSVLQQLQTEVYRGAQTLVVPNCDHRGFYRKRQCRSS  
QGQRRGPCWCVDRMGKSLPGSPDGNGSSSCPTGSSG