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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human IGFBP7 Protein
Catalog Number: hRP-1120
Manufacturer: LD Biopharma, Inc.

Introduction

Human insulin-like growth factor-binding protein 7 (IGFBP7) gene encodes a member of the insulin-like growth factor (IGF)-binding protein (IGFBP) family. IGFBPs bind IGFs with high affinity, and regulate IGF availability in body fluids and tissues and modulate IGF binding to its receptors. IGFBP7 protein binds IGF-I and IGF-II with relatively low affinity, and belongs to a subfamily of low-affinity IGFBPs. It also stimulates prostacyclin production and cell adhesion. Alternatively spliced transcript variants encoding different isoforms have been described for this gene, and one variant has been associated with retinal arterial macroaneurysm.

Full-length mature protein of human IGFBP7 cDNA (27-282aa, Isoform-I, derived from BC066339) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is 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:	IGFBP7 (AGM; FSTL2; IGFBP _{rp1} ; MAC25; PSF; TAF)
Accession Number:	NP_689751
Species:	Human
Size:	50 µg / Vial
Composition:	0.4 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

Zhan, Y., et al., *Serum insulin-like, growth factor binding protein-related protein 1 (IGFBP-rP1) and endometrial cancer risk in Chinese women*. Int. J. Cancer 132 (2), 411-416



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(2013)

Sullivan,L., et al., *IGFBP7 promoter methylation and gene expression analysis in prostate cancer*. J. Urol. 188 (4), 1354-1360 (2012)

Godfried Sie,C., et al., *IGFBP7's susceptibility to proteolysis is altered by A-to-I RNA editing of its transcript*. FEBS Lett. 586 (16), 2313-2317 (2012)

Liu,Z.K., et al., *Insulin-like growth factor binding protein 7 modulates estrogen-induced trophoblast proliferation and invasion in HTR-8 and JEG-3 cells*. Cell Biochem. Biophys. 63 (1), 73-84 (2012)

Applications

1. May be used for in vitro IGFBP7 mediated ERK pathway regulation study with this protein as either coating matrix protein or soluble factor.
2. May be used as IGFBP7 protein-protein interaction assay.
3. Potential cancer diagnostic biomarker protein, such as endometrial cancer.
4. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHGNLYFQGGEFSSSDTCGPCEPASCPPLPPLGCLLGETRDACGCCP
MCARGEGEPCGGGGAGRGYCAPGMECVKSRKRRKGKAGAAAGGPGVSGVCVCKSRYPVCGSDGT
TYPSGCQLRAASQRAESRGEKAITQVSKGTCEQGPSIVTPPKDIWNVGTGAQVYLSCEVIGIPTP
VLIWNVKVRGHHYGVQRTELLPGDRDNLAIQTRGGPEKHEVTGWVLVSPLSKEDAGEYECHASNS
QGQASASAKITVVDALHEIPVKKGEGAEI