



LD Biopharma, Inc.
6042 Cornerstone CT. W. Suite E
San Diego, CA 92121
Tel: 858-876-8266
Fax: 858-638-0488
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human IGFBP5 Protein
Catalog Number: hRP-1127
Manufacturer: LD Biopharma, Inc.

Introduction

Human insulin-like growth factor-binding protein 5 (IGFBP5) gene is a member of the insulin-like growth factor binding protein (IGFBP) family and encodes a protein with an IGFBP domain and a thyroglobulin type-I domain. Recently, several studies have linked IGFBP5 to cancer metastasis, and have been associated with poor prognosis during metastasis. IGFBP5 has been demonstrated to interact directly with integrins $\alpha 2\beta 1$, which plays a role in epithelial-mesenchymal transition.

Full-length mature protein of human IGFBP5 cDNA (20-272aa, derived from BC011453) 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: IGFBP5 (IBP5)
Accession Number: NP_000590
Species: Human
Size: 50 μ g / Vial
Composition: 0.5 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

Lee,S.R., *Influence of vascular endothelial growth factor on the expression of insulin-like growth factor-II, insulin-like growth factor binding protein-2 and 5 in human luteinized granulosa cells.* Gynecol. Endocrinol. 28 (11), 917-920 (2012)



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Sureshababu,A., et al., *IGFBP5 induces cell adhesion, increases cell survival and inhibits cell migration in MCF-7 human breast cancer cells.* J. Cell. Sci. 125 (PT 7), 1693-1705 (2012)

Peruzzi,B., et al., *c-Src and IL-6 inhibit osteoblast differentiation and integrate IGFBP5 signalling.* Nat Commun 3, 630 (2012)

Applications

1. May be used for in vitro IGFBP5 mediated IGF-independent activation of Akt activity regulation study through $\alpha 2\beta 1$ integrin binding with this protein as either coating matrix protein or soluble factor.
2. May be used as IGFBP5 protein-protein interaction assay.
3. As enzymatic substrate for various proteases, such as , such as PAPP-A2, et al.,
4. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGFFLGSFVHCEPCDEKALSMCPPSPLGCELVKEPGCGC
CMTCALAEGQSCGVYTERCAQGLRCLPRQDEEKPLHALLHGRGVCLNEKSYREQVKIERDSREH
EEPTTSEMAEETYSPKIFRPKHTRISELKAEAVKKDRRKKLTQSKFVGGGAENTAHPR I ISAPEM
RQESEQGPCRRHMEASLQELKASPRMVPRAVYLPNCDRKGIFYKRKQCKPSRGRKRGICWCVDKY
GMKLPGMEYVDGDFQCHTFDSSNVE