



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human IGFBP4 Protein
Catalog Number: hRP-1125
Manufacturer: LD Biopharma, Inc.

Introduction

Human insulin-like growth factor-binding protein 4 (IGFBP4) 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. The IGFBP4 binds both insulin-like growth factor (IGF) I or II and circulates in the plasma in both glycosylated and non-glycosylated forms. Binding of this protein prolongs the half-life of IGFs and alters their interaction with cell surface receptors.

Full-length mature protein of human IGFBP4 cDNA (22-258aa, derived from BC016041) 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: IGFBP4 (BP_4; HT29-IGFBP)
Accession Number: NP_001543
Species: Human
Size: 50 µg / 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

Qiu,Q.,et al., *Significance of IGFBP-4 in the development of fetal growth restriction.* J. Clin. Endocrinol. Metab. 97 (8), E1429-E1439 (2012)



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Mak, J.Y., et al., *Association of IGF1 gene haplotypes with high myopia in Chinese adults*. Arch. Ophthalmol. 130 (2), 209-216 (2012)

Lunetta, C., et al., *Impaired expression of insulin-like growth factor-1 system in skeletal muscle of amyotrophic lateral sclerosis patients*
Muscle Nerve 45 (2), 200-208 (2012)

Contois, L.W., et al., *Insulin-like growth factor binding protein-4 differentially inhibits growth factor-induced angiogenesis*. J. Biol. Chem. 287 (3), 1779-1789 (2012)

Applications

1. May be used for in vitro IGFBP4 mediated VEGF pathway regulation study on endothelial cell growth with this protein as either coating matrix protein or as soluble factor.
2. May be used for IGFBP4 protein – protein interaction assay.
3. May be used as enzymatic substrate for various proteases.
4. Potential biomarker protein for FGR (Fetal growth restriction).
5. May be used for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGFDEAIHCPPCSEKLRARPPVVGCEELVREPGCGCC
ATCALGLGMPCGVYTPRCGSLRCYPPRGVEKPLHTLMHGQGVCMELAEIEAIQESLQPSDKDE
GDHPNNSFSPCSAHDRRCLQKHFAKIRDRSTSGGKMKVNGAPREDARVPVQGSCQSELHRALER
LAASQSRTHEDLYIIPINCDRNGNFHPKQCHPALDGQRGKWCVDRKTGVKLPGGLEPKGELD
CHQLADSFRE