

Human IGFBP4 Protein (His Tag)

Catalog Number: 10967-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

BP-4, HT29-IGFBP, IBP4, IGFBP-4, IGFBP4

Protein Construction:

A DNA sequence encoding the human IGFBP4 (NP_001543.2) precursor (Met 1-Glu 258) with a C-terminal polyhistidine tag was expressed.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

1. Measured by its ability to bind human IGF1 (Cat:10598-H24E) in functional ELISA.
2. Measured by its ability to bind human IGF2 (Cat:13032-H24E) in functional ELISA.
3. Measured by its ability to inhibit the biological activity of IGF-I or IGF-II on MCF7 human breast adenocarcinoma cells (Karey, K.P. et al. (1988) Cancer Research 48:4083.). The ED50 for this effect is typically 0.04-0.4 µg/mL in the presence of 14 ng/mL human IGFII.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Asp 22

Molecular Mass:

The secreted recombinant human IGFBP4 comprises 248 amino acids with a predicted molecular mass of 27.4 kDa. As a result of glycosylation, it migrates as an approximately 32 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

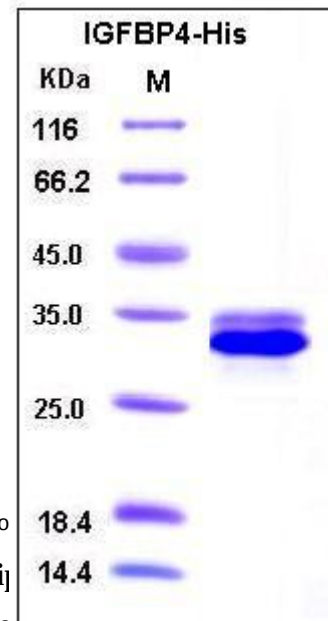
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution

re products.

Protein Description:

Insulin-like growth factor (IGF) is a polypeptide hormone that controls bioavailability, activity, and distribution of INSULIN-LIKE GROWTH FACTOR (IGF) through high-affinity IGFBP/IGF complexes. Six high-affinity IGF-binding proteins (IGFBP-1 to -6) have been identified, and IGFBP4, the smallest IGFBP expressed by a wide range of cell types, exists in both non-glycosylated and N-glycosylated forms in all biological fluids. Structurally consisting of an IGFBP domain and a thyroglobulin type-I domain, IGFBP4 binds IGF-I and IGF-II with similar affinities as a transport protein and modulates their biological effects. Increasing evidences indicate that IGFBP4 inhibits IGF-induced cellular growth both in vitro and in vivo. As an important member of the IGF system, IGFBP4 is involved in a wide range of biological processes including reproductive physiology, bone formation, renal pathophysiology and carcinomas.

References

1. Durai, R. et al., 2006, Int. J. Oncol. 28: 1317-1325.
2. Sitar, T. et al., 2006, Proc. Natl. Acad. Sci. U.S.A. 103: 13028-13033.
3. Zhou, R. et al., 2003, J. Endocrinol. 178: 177-193.
4. Zhou, J. et al., 2003, Biol. Reprod. 69: 22-29.

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