

Cynomolgus IGFBP3 Protein (His Tag)

Catalog Number: 90084-C07H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

IGFBP3

Protein Construction:

A DNA sequence encoding the cynomolgus IGFBP3 (Gly28-Lys291) was expressed with a polyhistidine tag at the N-terminus.

Source: Cynomolgus

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to inhibit the biological activity of IGFI or IGFI on MCF7 human breast adenocarcinoma cells (Karey, K.P. et al. (1988) Cancer Research 48:4083.). The ED50 for this effect is typically 0.15-0.75 µg/mL in the presence of 14 ng/mL human IGFI.

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: His

Molecular Mass:

The recombinant heterodimer of cynomolgus IGFBP3 comprises 284 amino acids and has a calculated molecular mass of 31.1 KDa. The apparent molecular mass of the protein is approximately 41-44 KDa respectively in SDS-PAGE.

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.

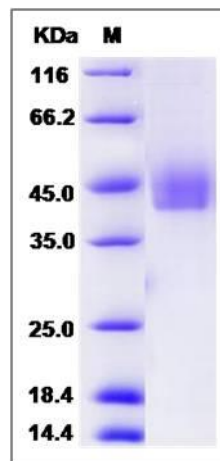
Usage Guide

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 instructions are sent along with the products.

Protein Description

Insulin-like growth factor-binding proteins (IGFBPs) prolong the half-life of the IGFs, control 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. Human IGFBP3 is a widely expressed protein containing an IGFBP domain at the N-terminus and a thyroglobulin type-I domain. IGFBP3 forms a ternary complex of about 140 ~150 kDa with IGF1 or IGF2 and a glycoprotein insulin-like growth factor acid-labile subunit (ALS), thus alter the interaction of IGFs with their cell surface receptors. IGFBP3 exerts either proapoptotic or growth stimulatory effects depending upon the cellular context. Studies have shown that IGFBP3 can lead to the induction of apoptosis dependent or independent of the IGF-IGF receptor axis, accordingly acts as a negative regulator of tumorigenesis and progressing in certain carcinomas. In addition, IGFBP3 also interacts with the Alzheimer's survival peptide humanin (HN), playing a role in neurological disease processes.

References

1. Cabbage ML. et al., 1990, J Biol Chem. 265: 12642-9.
2. Ikonen M. et al., 2003, Proc Natl Acad Sci. 100: 130428-47.
3. Kim HS. et al., 2004, Cancer Res. 64: 2229-37.
4. Hong J. et al., 2002, J Biol Chem. 277: 10488-97.

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