Human IGFBP7 / IBP-7 Protein (His Tag)

Catalog Number: **13100-H08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

AGM; FSTL2; IBP-7; IGFBP-7; IGFBP-7v; IGFBPRP1; MAC25; PSF; RAMSVPS; TAF

Protein Construction:

A DNA sequence encoding the human IGFBP7 (Q16270) (Met 1-Leu 282) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized IGFBP7 at 20 μg/ml (100 μl/well) can bind biotinylated human IGF2-nusa . The EC_{50} of biotinylated human IGF2-nusa is 0.57 μg/ml.

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 ℃

Predicted N terminal: Ser 27

Molecular Mass:

The secreted recombinant human IGFBP7 comprises 267 amino acids and has a predicted molecular mass of 27.9 kDa. Since IGFBP7 can be proteolytically cleaved between lysine 97 and alanine 98, the apparent molecular mass of rh IGFBP7 is approximately 36 & 32 kDa in SDS-PAGE under reducing conditions, corresponding to the whole protein and the cleaved form respectively.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 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:

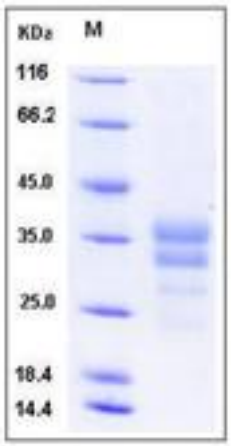
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Insulin like growth factor binding protein 7 (IGFBP7) is a member of the IGFBP family. It has been identified in colorectal adenocarcinoma (CRC) cell lines. The Insulin-like growth factor-binding protein also known as IGFBP serves as a carrier protein for Insulin-like growth factor 1. IGFBPs are clearly distinct but are sharing regions with strong homology. All members of the IGFBP family bind IGF-I and IGF-II with about equal affinity. Insulin-like growth factor (IGF) binding proteins (IGFBPs) have been shown to either inhibit or enhance the action of IGF, or act in an IGF-independent manner in the prostate. IGFBP7 could inhibit cell growth, decrease soft agar colony formation activity and induce apoptosis in RKO and SW620 cells. There is mounting evidence that the structure of the IGFBP proteins plays a key role in the regulation of IGF bioavailability, by modulating its molecular size, capillary membrane permeability, target tissue specificity, cell membrane adherence and IGF affinity.

References

1.Oh Y, *et al.* (1996) Synthesis and characterization of insulin-like growth factor-binding protein (IGFBP)-7. Recombinant human mac25 protein specifically binds IGF-I and -II. J Biol Chem. 271(48): 30322-5. 2.Wilson EM, *et al.* (1997) Generation and characterization of an IGFBP-7 antibody: identification of 31kD IGFBP-7 in human biological fluids and Hs578T human breast cancer conditioned media. J Clin Endocrinol Metab. 82(4): 1301-3. 3.Lin J, *et al.* (2007) Methylation patterns of IGFBP7 in colon cancer cell lines are associated with levels of gene expression. J Pathol. 212(1): 83-90.