

# Human IGFBP6 / IBP-6 Protein (His Tag)

Catalog Number: 13026-H08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

IBP6

### Protein Construction:

A DNA sequence encoding the human IGFBP6 (P24592) (Met 1-Gly 240) was fused with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 96 % 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 IGFII on MCF7 human breast adenocarcinoma cells (Karey, K.P. et al. (1988) Cancer Research 48:4083.). The ED<sub>50</sub> for this effect is typically 1-5 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:** Arg 28

### Molecular Mass:

The recombinant human IGFBP6 consists of 224 amino acids and has a predicted molecular mass of 23.9 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhIGFBP6 is approximately 36 kDa due to glycosylation.

### 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:

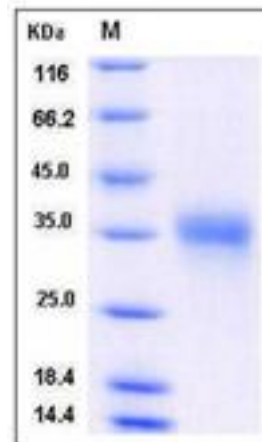
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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 6 (IGFBP6) is a 24-kDa protein that binds insulin-like growth factor 1 (IGF-1) and IGF-2 with high affinity and inhibits IGF action in vitro. 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. IGF-binding protein-4 (IGFBP-4) inhibits IGF-I action in vitro and is the most abundant IGFBP in the rodent arterial wall. IGFBP6 is directly downregulated by the beta-catenin/TCF complex in desmoid tumors, and imply a role for the IGF axis in the proliferation of desmoid tumors. 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. Denys H, et al. (2004) Identification of IGFBP-6 as a significantly downregulated gene by beta-catenin in desmoid tumors. *Oncogene*. 23(3): 654-64.
2. Bach LA. Insulin-like growth factor binding protein-6: the "forgotten" binding protein? *Horm Metab Res*. 31(2-3): 226-34.
3. Bach LA. IGFBP-6 five years on; not so 'forgotten'? *Growth Horm IGF Res*. 15(3): 185-92.

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