IGFBP4 Active Protein

PRODUCT OVERVIEW

Product Name	IGFBP4, Active Protein
Full Product Name	IGFBP4 Protein, Cynomolgus, Recombinant (His Tag)
Product Gene Name	IGFBP4 active protein
Product Synonym Names	Cynomolgus IGFBP4 Protein (His Tag); insulin-like growth factor binding protein 4
Sequence	Met1-Glu25 8
Host	HEK293 Cells
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Purity/Purification	>80% as determined by SDS-PAGE
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.
Molecular Weight	The recombinant heterodimer of cynomolgus IGFBP4 comprises 248 amino acids and has a calculated molecular mass of 27.4kDa. The apparent molecular mass of the protein is approximately 33-36kDa respectively in SDS-PAGE.
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Species	Cynomolgus
Activity	Measured by its ability to inhibit the biological activity of IGFII on MCF7 human breast adenocarcinoma cells. The ED50 for this effect is typically 0.04-0.2ug/mL in the presence of 14ng/mL human IGFII.
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Asp 22
Tag	C-His
Protein Construction	A DNA sequence encoding the cynomolgus IGFBP4 (Met1-Glu258) was expressed with a polyhistidine tag at the C-terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Related Product Information for IGFBP4 active protein	Background: Insulin-like growth factor-binding protein 4 (IGFBP-4) 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 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. Expression of IGFBP-4 mRNA in nontransgenic littermates was maximal in the liver and kidney. IGFBP-4 is a functional antagonist of IGF-I action on SMC. 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.

Product References and Citations for IGFBP4 active protein	Wang J, et al. (1998) Overexpression of insulin-like growth factor-binding protein-4 (IGFBP-4) in smooth muscle cells of transgenic mice through a smooth muscle alpha-actin-IGFBP-4 fusion gene induces smooth muscle hypoplasia. Endocrinology. 139(5): 2605-14.Chernausek SD, et al. (1995) Proteolytic cleavage of insulin-like growth factor binding protein 4 (IGFBP-4). Localization of cleavage site to non-homologous region of native IGFBP-4. J Biol Chem. 1995 May 12;270(19):11377-82. Karey, K.P. et al. (1988) Cancer Research 48:4083.
Other Notes	Small volumes of IGFBP4 active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for IGFBP4 purchase	MBS8123544 is an active protein targeting IGFBP4. Also known as IGFBP4 Protein, Cynomolgus, Recombinant (His Tag). Host: HEK293 Cells.



SDS-Page of IGFBP4 active protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IGFBP4. It may not necessarily be applicable to this product.

Protein Family	Insulin-like growth factor-binding protein
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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