

IGFBP4 active protein

IGFBP4 Protein, Human, Recombinant (His Tag)

CATALOG #
AAA257955

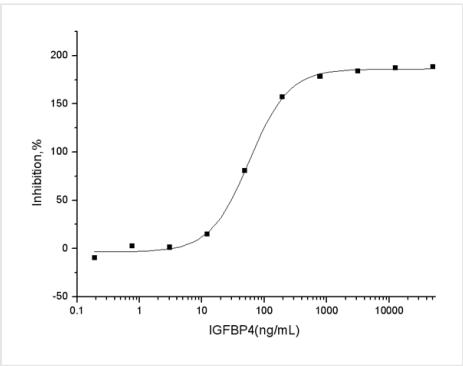
HOST
HEK293 Cells

PRODUCT SYNONYMS

IGFBP4; IGFBP4 Protein; Human; Recombinant (His Tag); Human IGFBP4 Protein (His Tag); BP-4 Protein; HT29-IGFBP Protein; IBP4 Protein; IGFBP-4 Protein; insulin-like growth factor binding protein 4; IGFBP4 active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>95% as determined by SDS-PAGE
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.
Sequence	Met1-Glu25 8
Species	Human
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 human IGFBP4 (NP_001543.2) precursor (Met 1-Glu 258) with a C-terminal polyhistidine tag was expressed.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Activity	1. Measured by its ability to bind human IGF1 in functional ELISA. 2. Measured by its ability to bind human IGF2 in functional ELISA. 3. Measured by its ability to inhibit the biological activity of IGF1 or IGFII on MCF7 human breast adenocarcinoma cells (Karey, K.P. et al. (1988) Cancer Research 48:4083.). The ED50 for this effect is typically 0.04-0.4ug/mL in the presence of 14ng/mL human IGFII.
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.



SDS-PAGE

Application Data
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 ug/mL in the presence of 14 ng/mL human IGF-II.

ADDITIONAL 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.

References

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.

NCBI AND UNIPROT INFORMATION

NCBI GI #	62243290
NCBI GeneID	3487
NCBI Accession #	NP_001543.2
NCBI GenBank Nucleotide #	NM_001552.2
UniProt Accession #	P22692; Q5U012; Q9UCL6; A0N9W2
Molecular Weight	27,934 Da
NCBI Official Full Name	insulin-like growth factor-binding protein 4
NCBI Official Synonym Full Names	insulin-like growth factor binding protein 4
NCBI Official Symbol	IGFBP4
NCBI Official Synonym Symbols	BP-4; IBP4; IGFBP-4; HT29-IGFBP
NCBI Protein Information	insulin-like growth factor-binding protein 4; IBP-4; IGF-binding protein 4
UniProt Protein Name	Insulin-like growth factor-binding protein 4

UniProt Gene Name	IGFBP4
UniProt Synonym Gene Names	IBP4; IBP-4; IGF-binding protein 4; IGFBP-4
UniProt Entry Name	IBP4_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/hek293-cells-active-protein/igfbp4/257955>