Active Recombinant Human IGFBP-4, Carrier Free

Cat. No. IGFBP4-8H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Mature IGFBP-4 (Kiefer, M. et al., 1991, J. Biol. Chem. 266:9043 - 9049) (aa residues Asp 22 - Glu 258) was fused to the signal peptide of CD33 and the chimera was expressed in a mouse myeloma cell line, NS0.
Species	Human
Source	Mammalian Cells
ProteinLength	22-258 a.a.
Description	Human IGF binding protein 4 (IGFBP-4) was isolated from human plasma based on its ability to bind immobilized IGF-I. Human IGFBP-4 cDNA encodes a 258 amino acid (aa) residue precursor protein with a predicted 21 aa residue signal peptide that is pr centigradeessed to generate the 237 aa residue mature human IGFBP-4. The human IGFBP-4 contains a potential N-linked glycosylation site and shares approximately 90% amino acid sequence identity with both the mouse and rat IGFBP-4. According to the nomenclature of IGFBPs defined at the 4th International Symposium of IGFs (1997, Tokyo), six high-affinity IGF binding proteins (IGFBP-1, -2, -3, -4, -5, -6), and four IGFBP-related proteins (IGFBPr-1, - 2, -3, -4) have now been identified. All IGFBPs have a high cysteine content and share conserved cysteine residues that are clustered in the amino- and carboxy-terminal thirds of the molecule.
Form	Lyophilized from a 0.2 μm filtered solution in PBS, pH 7.4.
Bio-activity	Measured by its ability to inhibit the biological activity of rhIGF-I or rhIGF-II on MCF-7

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	cells (Karey, K.P. et al., 1988, Cancer Research 48:4083). The ED50 for this effect is typically 0.03 - 0.09 µg/mL in the presence of 14 ng/mL rhIGF-II.
Molecular Mass	Met 17 from the CD33 signal peptide was retained in the recombinant mature human IGFBP-4. The 238 amino acid residue recombinant mature human IGFBP-4 has a calculated molecular mass of approximately 26 kDa. As a result of glycosylation, the recombinant protein migrates as a 32 kDa and 25 kDa protein under reducing and non-reducing conditions, respectively.
Endotoxin	< 1.0 eu per 1 µg of the cytokine as determined by the lal
Purity	>97%, as determined by SDS-PAGE and visualized by silver stain.
Usage	FOR RESEARCH USE ONLY
Quality Control Test	Lyophilized samples are stable for up to six months at -20 centigrade to -70 centigrade. Upon reconstitution, this cytokine, in the presence of a carrier protein, can be stored under sterile conditions at 2 - 8 centigrade for one month or at -20 centigrade to -70 centigrade in a manual defrost freezer for three months without detectable loss of activity.
Reconstitution	It is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a st centigradek solution of no less than 25 µg/mL.
Warning	Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	IGFBP4 insulin-like growth factor binding protein 4 [Homo sapiens]

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Official Symbol	IGFBP4
Synonyms	IGFBP4; insulin-like growth factor binding protein 4; insulin like growth factor binding protein 4; insulin-like growth factor-binding protein 4; BP 4; HT29 IGFBP; IBP4; IGF binding protein 4; IGFBP 4; IBP-4; IGF-binding protein 4; BP-4; IGFBP-4; HT29-IGFBP;
Gene ID	3487
mRNA Refseq	NM_001552
Protein Refseq	NP_001543
MIM	146733
UniProt ID	P22692
Chromosome Location	17q12-q21.1
Pathway	Diabetes pathways, organism-specific biosystem; Disease, organism-specific biosystem; Myometrial Relaxation and Contraction Pathways, organism-specific biosystem; Regulation of Insulin-like Growth Factor (IGF) Activity by Insulin-like Growth Factor Binding Proteins (IGFBPs), organism-specific biosystem; Wnt signaling network, organism-specific biosystem;
Function	insulin-like growth factor binding;

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