

Active Recombinant Human Insulin-like Growth Factor Binding Protein 3

Cat. No. IGFBP3-145H **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Human Insulin-like Growth Factor Binding Protein 3 DNA sequence encoding the human Insulin-like Growth Factor Binding Protein 3 sequence (containing the signal peptide sequence, and the mature human IGFBP-3 sequence) was expressed in modified *human 293 cells*.

Species Human

Source HEK293

Description Insulin-like Growth Factor Binding Protein 3 is a member of the insulin-like growth factor binding protein (IGFBP) family. This family includes IGFBP-1 to IGFBP-6 that bind to the insulin-like growth factors (IGFs), thus regulating the half-life, activity, transport, and tissue distribution of the IGFs. Structurally, the IGFBP family of proteins is defined by highly homologous amino and carboxy terminal domains with a structurally diverse central region.

Amino Acid Sequence GASSGGLGPVVRCEPCDARALAQCAPPAVCAELVREPGCGCCLTCALSEGQPCG
 IYTERCGSGLRCQPSPDEARPLQALLDGRGLCVNASAVSRLRAYLLPAPPAGNAS
 ESEEDRSAGSVESPSVSSTHRVSDPKFHPLHSHKIIKKGHAKDSQRYKVDYESQSTD
 TQNFSSSESKRETEYGPCRREMEDTLNHLKFLNVLSPRGVHIPNCDKKGFFYKKKQCR
 PSKGRKRGFCWCVDKYGQPLPGYTTKGKEDVHCYSMQSK.

Molecular Mass Insulin-like Growth Factor Binding Protein 3 migrates as a broad band between 40

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and 45 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the unmodified IGFBP-3 that has a predicted molecular mass of 28.7 kDa.

pl

Insulin-like Growth Factor Binding Protein 3 separates into a number of isoforms with a pl between 6.8 and 8.2 in 2D PAGE due to post-translational modifications, in particular glycosylation. This compares with the unmodified IGFBP-3 that has a predicted pl of 8.76.

% Carbohydrate

Purified Insulin-like Growth Factor Binding Protein 3 consists of 25-35% carbohydrate by weight.

Purity

>95%, as determined by SDS-PAGE and visualized by silver stain.

Formulation

When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.

Reconstitution

It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.

Storage

Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.

Activity

The ED50 of Insulin-like Growth Factor Binding Protein 3 is typically 0.13-0.20 µg/ml as measured by its ability to neutralize rhIGF-II mediated proliferation of the MCF-7 adenocarcinoma cell line.

GENE INFORMATION

Gene Name

IGFBP3 insulin-like growth factor binding protein 3 [Homo sapiens]

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Synonyms	IGFBP3; insulin-like growth factor binding protein 3; IBP3; BP-53; binding protein 29; IGF-binding protein 3; growth hormone- dependent binding protein; acid stable subunit of the 140 K IGF complex
Gene ID	3486
mRNA Refseq	NM_000598
Protein Refseq	NP_000589
UniProt ID	P17936
Chromosome Location	7p13-p12
MIM	146732
Pathway	p53 signaling pathway; Diabetes pathways
Function	insulin-like growth factor I binding; metal ion binding; protein tyrosine phosphatase activator activity

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