

Product Specification Sheet

Recombinant mouse Insulin Binding Protein 6 (IGFBP-6) Protein

Cat. IGFBP66-R-10 Recombinant mouse Insulin Like Growth Factor Binding Protein-6 (IGFBP-6) protein
SIZE: 10 ug

The insulin like growth factors (IGFs) are the major growth-promoting factors in the plasma. IGFs are secreted by a variety of cells and exert a multitude of effects on cellular survival, growth and differentiation. The A and B domains of IGFs are identical to insulin. IGF initiates their biological action through binding to the type IGF receptor (IGF-1R), a heterotrimeric protein complex with a tyrosine kinase activity. The IGF-IIR lacks the kinase activity and is actually identical to the mannose-6-phosphate receptor. Unlike most other peptide hormones, IGFs are complexed with specific binding proteins in the plasma known **IGF Binding proteins (IGFBPs)**. At least 6 related IGFBPs (**IGFBP1-6**) have been well characterized. Recently, **IGFBP-7/Mac25/prostacyclin-stimulating factor (PSF)/tumor adhesion factor (TAF)** was originally identified as a cDNA derived from leptomeninges. These proteins are present in plasma in high concentration as compared to the membrane IGFs. Therefore, IGFBPs have the potential to modulate the IGF action. IGFBPs have been shown to either inhibit or stimulate the IGF effects. The primary structures of mammalian IGFBPs appear to contain three distinct domains of roughly equivalent sizes: the conserved N-terminal domain, the highly variable mid region, and the conserved C-terminal domain. Human IGFBPs share approximately 36% identity.

Human IGFBP-6 is a 240-aa (mature protein 27-240aa). IGFBP6 plays a role in lipoprotein assembly and dietary cholesterol absorption. In addition to its acyltransferase activity, it may act as a ligase. It may provide cholesteryl esters for lipoprotein secretion from hepatocytes and intestinal mucosa.

Protein name Insulin-like growth factor-binding protein 6
Synonyms IGFBP-6, IBP-6, IGF-binding protein 6, Gene name Name: IGFBP6, Synonyms: IBP6

FUNCTION: IGF-binding proteins prolong the half-life of the IGFs and have been shown to either inhibit or stimulate the growth promoting effects of the IGFs on cell culture. They alter the interaction of IGFs with their cell surface receptors.

SUBCELLULAR LOCATION: Secreted.

PTM: O-linked glycans consist of hexose (probably Gal), N-acetylhexosamine (probably GalNAc) and sialic acid residues. Major glycoforms consist of 8-16 monosaccharides (by homology to IGFBP6 expressed recombinantly in CHO cells).

SIMILARITY: Contains 1 IGFBP N-terminal domain.

Source of Antigen and Antibodies

Mouse IGFBP-6 protein (24-236 aa ~23 Kda)-was was expressed in NS0 cells as human CD33 fusion protein and purified (>95%). It is supplied lyophilized in 30% acetonitrile/0.1%TFA (see lot sp concn on the vial). Working dilution should be made in PBS, pH 7.4 containing 0.1% BSA or HSA (free from IGFII) at 10 ug/ml or higher.

IGFBP protein is stable for at least 6-months at -20oC or below. Store reconstituted protein in suitable size aliquots at -20oC or below for up to 3-months without significant loss of activity.

Endotoxin level: Purified mouse IGFBP-6 has very low Endotoxin level (<1 EU/ug protein).

Biological activity: Measured by its ability to inhibit the biological activity of rIGF-II on MCF-7 cells (ED50 ~0.5-2 ug/ml in the presence of 30 ng/ml mouse IGF-II).

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

General References: (1) Kiefer MC (1991) BBRC 176, 219-225; Shimasaki S (1991) JBC 266, 10646-10653; Address DL (1991) BBRC 176, 213-218; Kalus WE (1998) EMBO J 17, 6558-6572

*This product is for in vitro research use only.

Related items

IGFBP-1-7 antibodies, IGFBP-1 ELISA kit
IGFBP1-7 recombinant proteins

IGFBP66-R-10

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