10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IGF-BP-3

Catalog # PVGS1122

Specification

IGF-BP-3 - Product Information

Primary Accession P17936

Species
Human

Sequence
Gly28-Lys291

Purity
> 98% as analyzed by SDS-PAGE
> 98% as analyzed by HPLC

Endotoxin Level
< 1 EU/ µg of protein by LAL method

Biological Activity
Fully biologically active when compared to standard. The ED₅₀ as determined by inhibiting IGF-II induced proliferation of serum free human MCF-7 cells is less than 200.0 ng/ml, corresponding to a specific activity of > 5.0 × 10³ IU/mg in the presence of 15.0 ng/ml of rHuIGF-II.

Expression System
E. coli

Theoretical Molecular Weight
28.8 kDa

Formulation **Lyophilized from a 0.2 µm filtered solution in PBS, pH 7.4.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

IGF-BP-3 - Additional Information

Gene ID 3486

Other Names
Insulin-like growth factor-binding protein 3, IBP-3, IGF-binding protein 3, IGFBP-3, IGFBP3, IBP3

Target Background
IGF-BP3 is a 30 kDa cysteine-rich secreted protein. It is the major IGF binding protein present in the plasma of human and animals and it is also found in α-granules of platelets. In addition to its ability to modulate the activity of IGF-I and IGF-II, IGF-BP3 exerts inhibitory effects on follicle stimulating hormone (FSH) activity. Decreased plasma levels of IGF-BP3 often results in dwarfism, whereas elevated levels of IGF-BP3 may lead to acromegaly. The expression of IGF-BP3 in fibroblasts is stimulated by mitogenic growth factors such as Bombesin, Vasopressin, PDGF, and EGF.

IGF-BP-3 - Protein Information

Name IGFBP3

Synonyms IBP3

Function
Multifunctional protein that plays a critical role in regulating the availability of IGFs such as IGF1 and IGF2 to their receptors and thereby regulates IGF-mediated cellular processes including proliferation, differentiation, and apoptosis in a cell-type specific manner (PubMed:10874028, PubMed:19556345). Also exhibits IGF- independent antiproliferative and apoptotic effects mediated by its receptor TMEM219/IGFBP-3R (PubMed:20353938). Inhibits the positive effect of humanin on insulin sensitivity (PubMed:19623253). Promotes testicular germ cell apoptosis (PubMed:19952275). Acts via LRP-1/alpha2M receptor, also known as TGF-beta type V receptor, to mediate cell growth inhibition independent of IGF1 (PubMed:9252371). Mechanistically, induces serine-specific dephosphorylation of IRS1 or IRS2 upon ligation to its receptor, leading to the inhibitory cascade (PubMed:15371331). In the nucleus, interacts with transcription factors such as retinoid X receptor-alpha/RXRA to regulate transcriptional signaling and apoptosis (PubMed:10874028).

Cellular Location
Secreted. Nucleus

Tissue Location
Expressed by most tissues. Present in plasma.

IGF-BP-3 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety

- Cell Culture

IGF-BP-3 - Images