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

# IGF-BP-3

Catalog # PVGS1122

## Product Information

| | |
|---|---|
| **Primary Accession** | P17936 |
| **Species** | Human |
| **Sequence** | Gly28-Lys291 |
| **Purity** | > 98% as analyzed by SDS-PAGE<br>> 98% as analyzed by HPLC |
| **Endotoxin Level** | |
| **Biological Activity** | Fully biologically active when compared to standard. The $ED_{50}$ 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 > $5.0 \times 10^3$ 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. |

## 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. |

## 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. |

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.