Datasheet

Cat. No. P1288

# Recombinant Human Insulin-like Growth Factor-Binding Protein 3

## Information

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|---|---|
| Gene ID | 3486 |
| Accession # | P17936 |
| Alternate Names | Growth-hormone-dependant Binding Protein, IBP-3, IGF-binding protein 3 |
| Source | Escherichia coli. |
| M.Wt | Approximately 28.8 kDa, a single non-glycosylated polypeptide chain containing 264 amino acids. |
| AA Sequence | GASSAGLGPV VRCEPCDARA LAQCAPPPAV CAELVREPGC GCCLTCALSE GQPCGIYTER CGSGLRCQPS PDEARPLQAL LDGRGLCVNA SAVSRLRAYL LPAPPAPGNA SESEEDRSAG SVESPSVSST HRVSDPKFHP LHSKIIIIKK GHAKDSQRYK VDYESQSTDT QNFSSESKRE TEYGPCRREM EDTLNHLKFL NVLSPRGVHI PNCDKKGFYK KKQCRPSKGR KRGFCWCVDK YGQPLPGYTT KGKEDVHCYS MQSK |
| Appearance | Sterile Filtered White lyophilized (freeze-dried) powder. |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles<br>- 12 months from date of receipt, -20 to -70 °C as supplied<br>- 1 month, 2 to 8 °C under sterile conditions after reconstitution<br>- 3 months, -20 to -70 °C under sterile conditions after reconstitution |
| Formulation | Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4. |
| Reconstitution | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions. |
| Biological Activity | Fully biologically active when compared to standard. The ED as determined by inhibiting IGF-II induced proliferation of serum free human MCF-7 cells is less than 200 ng/ml, corresponding to a specific activity of > 5.0 × 10 IU/mg in the presence of 15 ng/ml of rHuIGF-II. |
| Shipping Condition | Gel pack. |
| Handling | Centrifuge the vial prior to opening. |
| Usage | For Research Use Only! Not to be used in humans. |

## Components and Storage

| Components | 5μg | 100μg | 500μg |
|---|---|---|---|
| Recombinant Human Insulin-like Growth Factor-Binding Protein 3 | 5μg | 100μg | 500μg |

Use a manual defrost freezer and avoid repeated freeze-thaw cycles
- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

## Quality Control

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|---|---|
| Purity | > 98 % by SDS-PAGE and HPLC analyses. |
| Endotoxin | Less than 1 EU/μg of rHuIGF-BP3 as determined by LAL method. |

## Description

Insulin-like Growth Factor-Binding Protein 3 (IGF-BP3) belongs to the IGFBP family, which are all cysteinerich proteins with conserved cysteine and have an IGFBP domain and a thyroglobulin type-I domain. Mature human IGF-BP3 contains 264 a.a. with three potential N-linked and two potential O-linked glycosylation sites. It is expressed by most tissues and has higher levels during extrauterine life and peak during puberty. The expression of IGF-BP3 in fibroblasts is stimulated by mitogenic growth factors such as Bombesin, Vasopressin, PDGF, and EGF. The protein forms a ternary complex with IGF-I or II and acid-labile subunit. In this form, it circulates in the plasma, prolonging the half-life of IGFs and altering their interaction with cell surface receptors. Decreased plasma levels of IGF-BP3 often happen during the progression of prostate cancer from benign to metastatic disease.

## Reference


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2. Yilmaz MD, Hosal AS, Oguz H, et al. 2002. Laryngoscope, 112: 922-5
3. Deming SL, Ren Z, Wen W, et al. 2007. Breast Cancer Res Treat, 104: 309-19
4. Satterfield MC, Hayashi K, Song G, et al. 2008. Biol Reprod, 79: 1226-36
5. Key TJ, Appleby PN, Reeves GK, et al. 2010. Lancet Oncol, 11: 530-42.



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