

# Recombinant Human Insulin-Like Growth Factor Binding Protein-3 (rh IGFBP-3)

**Synonyms:** Growth-hormone-dependant binding protein, IBP3, BP-53

**Introduction:** IGFBP-3 is a member of the insulin-like growth factor binding protein (IGFBP) family and encodes a protein with an IGFBP domain and a thyroglobulin type-I domain. The protein forms a ternary complex with insulin-like growth factor acid-labile subunit (IGFALS) and either insulin-like growth factor (IGF) I or II. In this form it circulates in the plasma prolonging the half-life of IGFs and altering their interaction with cell surface receptors. Alternate transcriptional splice variants, encoding different isoforms, have been characterized.

**Description:** Recombinant human IGFBP-3 produced in *E.Coli* is a single, non-glycosylated, polypeptide chain containing 264 amino acids and having a molecular mass of 28806 Dalton. rh IGFBP-3 is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** The protein was lyophilized with 20mM Tris HCl.  
The aliquots/samples of 1µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized rh IGFBP-3 in sterile H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rh IGFBP-3 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh IGFBP-3 should be stored for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** Greater than 98.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

**Amino Acid Sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Gly-Ala-Ser-Ser-Gly.

**Biological Activity:** The ED<sub>50</sub>, calculated by its ability to inhibit IGF-II induced proliferation of MCF-7 is < 0.2 µg/ml in the presence of 15 ng/ml of Human IGF-II.

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|               |       |        |          |
|---------------|-------|--------|----------|
| <i>small</i>  | 5 µg  | Cat.N° | 11343810 |
| <i>medium</i> | 20 µg | Cat.N° | 11343814 |

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