

IGFBP-1

Insulin Like Growth Factor Binding Protein 1 human, recombinant, mouse myeloma (NSO) cells

Cat. No.	Amount
PR-456	20 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized. IGFBP-1 was lyophilized after dialysis against 10 mM HCl.

Solubility

It is recommended to reconstitute the lyophilized IGFBP-1 in sterile bidest H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Activity

IC₅₀: ~ 100 ng/ml (Inhibition of IGF-I stimulated proliferation of NUC-1 cells).

IC₅₀ (1% serum): ~ 300 ng/ml (Inhibition of serum-induced stimulation of DNA synthesis in chick embryo fibroblast primary cultures).

Endotoxin

Less than 0.1 ng/µg (IEU/µg) of IGFBP-1.

Molecular Weight

29 kDa

Purity

≥ 95% by SDS-PAGE and RP-HPLC

Description

IGFBP-1 is one of the six homologous proteins that specifically bind insulin-like growth factors and modulate their mitogenic and metabolic actions. The function of this protein is not completely defined. However, several studies demonstrate that it inhibits IGF binding to cell surface receptors and thereby inhibits IGF-mediated mitogenic and cell metabolic actions. Insulin Like Growth Factor Binding Protein modulate IGF activities by increasing their plasma half lives and by inhibiting or promoting the interactions of IGF with receptors on certain target cells. In addition these binding proteins provide a reservoir for IGF in pericellular spaces. Some IGFBPs also have stimulating effects *in vitro* and some may inhibit the growth of cells.

Recombinant human Insulin Like Growth Factor Binding Protein 1 is a single glycosylated polypeptide chain containing 218 amino acids and having a molecular mass of 28.806 kDa.

The IGFBP-1 is purified by proprietary chromatographic techniques.

Selected References:

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- Lathi *et al.* (2004) Dose-Dependent Insulin Regulation of IGFBP-1 in Human Endometrial Stromal Cells is Mediated by Distinct Signaling Pathways. *J. Clin. Endocrinol. Metab.*
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- Davies *et al.* (2004) Progesterone inhibits insulin-like growth factor binding protein-1 (IGFBP-1) production by explants of the Fallopian tube. *Mol. Hum. Reprod.* **10**:935.
- Skjaerbaek *et al.* (2004) Free IGF-I, IGFBP-1, and the binary complex of IGFBP-1 and IGF-I are increased during human pregnancy. *Horm. Res.* **62**:215.