



# GroPep Bioreagents

## Human IGFBP-1

### Description

Human Insulin-like growth factor binding protein-1 (IGFBP-1) is a 234 amino acid protein which is a member of a family of six circulating proteins that bind IGF-I and IGF-II with high affinity and modulate their metabolic and mitogenic effects. The liver, ovarian granulosa cells, decidualized endometrium and a number of other cell types produce native human IGFBP-1. IGFBP-1 binds both IGF-I and IGF-II. Serum IGFBP-1 levels are regulated by insulin-induced inhibition of IGFBP-1 production. IGFBP-1 appears to inhibit smooth muscle migration in response to IGF-I or IGF-II and to stimulate wound healing in response to IGF-II. Native IGFBP-1 is predominantly a lower molecular weight species of 218 amino acids and 3-4 phosphorylated forms.

### References

Liu L *et al* (1991) *Biochemical Biophysical Research Communications* **174**, 673-679  
Schuller AG *et al* (1993) *Growth Regulation* **3**, 32-34

### Source:

Purified from human amniotic fluid of individuals that have been shown by certified tests to be negative for hepatitis.

### Molecular Weight:

25,300 daltons

### Purity:

>90 % (by HPLC)

### Biological Activity:

Inhibition of IGF-I stimulated proliferation of NUC-1 cells: IC<sub>50</sub> ~100 ng/ml  
Inhibition of serum-induced stimulation of DNA synthesis in chick embryo fibroblast primary cultures: IC<sub>50</sub> ~300 ng/ml

### Appearance:

White powder freeze-dried from 10 mM HCl and stored under nitrogen under a slight vacuum.

### Storage/Stability:

At least 2 years at 2-4°C (as a freeze dried product).

### Reconstitution:

*Handling of GroPep IGF binding proteins 1-6*

### Detection:

*Procedure for Western Ligand blotting using iodinated IGF-I or IGF-II*  
*Procedure for Western Ligand blotting using biotinylated IGF-I or IGF-II*

### Product Codes and Pricing

**Human IGFBP-1**

**20 µg**

**BP1BU020**

### Related Products:

Human IGFBP-2  
Human IGFBP-3  
Human IGFBP-4  
Human IGFBP-5  
Human IGFBP-6

**\*\*NOT FOR USE IN HUMANS\*\***

**GroPep Bioreagents Pty Ltd**  
51 West Thebarton Road  
Thebarton SA 5031  
Australia

ABN 93 147 032 166

Telephone: +61 8 7222 1051

**Postal Address:**  
PO Box 10065  
Adelaide Business Centre  
SA 5000  
Australia

**Email:**  
[info@gropep.com](mailto:info@gropep.com)

**Internet:**  
[www.gropep.com](http://www.gropep.com)