

## Human IGF-I (Receptor Grade)

### Description

Human insulin-like growth factor-I (IGF-I) is a single chain 70 amino acid polypeptide that shares structural homology with insulin and human IGF-II. IGF-I plays a critical role in growth, differentiation and development via autocrine, paracrine and endocrine mechanisms. It is a mitogen and also has effects on cell migration and differentiation. IGF-I binds to the type I IGF receptor and most of its actions are probably mediated through inducing signal transduction via this receptor. IGF-I also binds to each of the six IGF binding proteins (IGFBPs). This binding also regulates the biological function of IGF-I. IGF-I is highly conserved across species which suggests an important role for the peptide. Human IGF-I is present in high concentrations in normal adult human serum in a complex with IGFBP-3 and the acid-labile subunit (ALS) and mediates many of the actions of Growth Hormone. IGF-I is a regulator of metabolism and is also implicated in the pathophysiology of cancer, diabetes and obesity.

### References

Humbel RE (1990) European Journal of Biochemistry **190**, 445-462  
Stewart CEH and Rotwein P (1996) Physiological Reviews **76**, 1005-1026  
Butler AA and Le Roith D (2001) Annual Review of Physiology **63**, 141-164

### Source:

Produced in *E.coli*.

### Molecular Weight:

7649 ± 2 Daltons

### Purity:

≥ 95 % (by HPLC analysis)

### N-terminal sequence:

Analysis of 5 residues

### Biological Activity:

Proliferation of Chinese hamster ovary (CHO) cells  
(EC<sub>50</sub> ≤ 30 ng/ml)

### Endotoxin:

≤ 0.1 EU/μg

### Appearance:

White powder freeze-dried from 0.1M acetic acid and stored under nitrogen at a slight vacuum.

### Storage/Stability:

At least 2 years at 2-8°C (as a freeze dried product).

### Reconstitution:

*Handling of GroPep IGF-I, IGF-II and IGF analogues*

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# GroPep® Bioreagents



## Product Codes

|                  |        |       |
|------------------|--------|-------|
| Human IGF-I (RG) | 20 µg  | CU020 |
|                  | 100 µg | CU100 |
|                  | 1 mg   | CM001 |
|                  | 5 mg   | CM005 |

## Related Products:

Biotinyl human IGF-I  
Human IGF-I (Media Grade)  
Human IGF-I antiserum (Rabbit)  
Human IGF-I monoclonal antibody  
Human IGF-II (Receptor Grade)

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

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