

# Recombinant human IGF-1 protein

Catalog Number: IGF0501

## PRODUCT INFORMATION

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**Expression system**

E.coli

**Domain**

49-118aa

**UniProt No.**

P05019

**NCBI Accession No.**

NP\_000609.1

**Alternative Names**

IBP1, IGF-1, IGFI, IGF-IA, IGF-IB, Insulin like growth factor 1 (somatomedin C), Insulin like growth factor IA, Insulin like growth factor IB, Insulin-like growth factor-1 IGF IA, Mechano growth factor, MGF, Somatomedin C

## PRODUCT SPECIFICATION

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**Molecular Weight**

7.7 kDa (71aa) confirmed by MALDI-TOF

**Concentration**

1mg/ml (determined by Bradford assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4)

**Purity**

&gt; 95% by SDS-PAGE

**Endotoxin level**

&lt; 1 EU per 1ug of protein (determined by LAL method)

**Biological Activity**Measured in a cell proliferation assay using MCF-7 human breast cancer cells. The ED50 range  $\leq$  5ng/ml.**Tag**

Non-Tagged

**Application**

SDS-PAGE, Bioactivity

**Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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# Recombinant human IGF-1 protein

Catalog Number: IGF0501

## Description

The Insulin-like growth factor-1 (IGF-1) is mitogenic polypeptide growth factors that stimulate the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. IGF-1 is predominantly produced by the liver, although a variety of tissues produce the IGFs at distinctive times. The IGF-1 belongs to the insulin gene family, which also contains insulin and relaxin. The IGF-1 is similar by structure and function to insulin, but have a much higher growth-promoting activity than insulin. This recombinant human IGF-1 is globular protein containing 70 amino acids, and 3 intra-molecular disulfide bonds. Recombinant IGF-1 was expressed in *E. coli* and purified by conventional chromatography, after refolding of the isolated inclusion bodies in a renaturation buffer.

## Amino acid Sequence

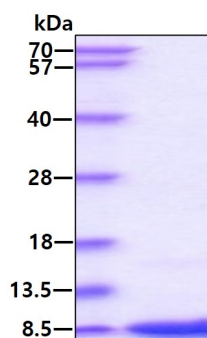
MGPETLCGAE LVDALQFVCG DRGFYFNKPT GYGSSSRRAP QTGIVDECCF RSCDLRRLEM YCAPLKPAKS A

## General References

Rinderknecht E., et al (1978) *J Biol.Chem*, 253: 2769.Zumstein P., et al (1987) *J Biol. Chem*, 262: 11252.Rabinovsky ED (2004) *Neurol Res*, 26: 204-210

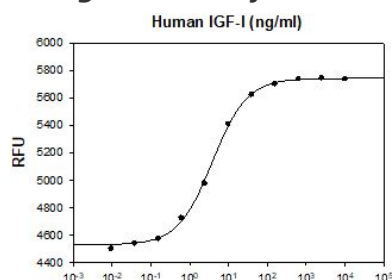
## DATA

### SDS-PAGE



3 $\mu$ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

### Biological Activity



Human IGF-1 stimulates cell proliferation of the MCF-7 human breast cancer cells. The ED50 range  $\leq 5$  ng/ml.