

**BACKGROUND**

Insulin-like Growth Factor I, IGF-I, is a growth factor produced in response to growth hormone-stimulated liver and can be found circulating throughout the body and throughout life. IGF-I activates the IGF-I receptor (IGF1R) and the insulin receptor to mediate growth of almost every cell of the body. IGF-I is known as one of the most potent activators of the AKT signaling pathway which is known to be a stimulator of proliferation and an inhibitor of programmed cell death. Mature human IGF-I is 100% homologous with bovine and porcine proteins.

Recombinant rat IGF-I is a non-glycosylated protein, containing 70 amino acids and having a molecular mass of 7.7 kDa.

**Alternative Names:**

Somatamedin C, mechano growth factor, IGF-IA

**Amino Acid Sequence:**

GPETLCGAEL VDALQFVCGP RGFYFNKPTG YGSSIRRAPQ  
TGIVDECCFR SCDLRRLEMY CAPLKPTKSA

**TECHNICAL INFORMATION**

**Source:** *E.coli*

**Physical Appearance:**

Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation:**

Recombinant rat IGF-I is lyophilized with no additives.

**Stability:**

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

**Protein Content and Purity determined by:**

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

**Endotoxin Level:**

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

**Biological Activity:**

The activity is measured in a serumfree cell proliferation assay using MCF7 cells and is typically 0.6-3 ng/mL.

*Products are for research use only. They are not intended for human, animal, or diagnostic applications.*

