

# Growth Factor Data Sheet

GoldBio growth factors are manufactured for RESEARCH USE ONLY and cannot be sold for human consumption!

The Insulin-like growth factors (IGFs) are mitogenic polypeptide growth factors that stimulate the proliferation and survival of various cell types including muscle, bone, and cartilage tissue *in vitro*. They are predominantly produced in the liver. IGFs belong to the Insulin gene family and are similar by structure and function to insulin, but have a much higher growth-promoting activity. IGF1 expression is regulated by growth hormone, while IGF2 expression is influenced by placenta lactogen. Both IGF1 and IGF2 signal through the tyrosine kinase type I receptor (IGF IR). Mature IGFs are generated through proteolytic processing of inactive precursor proteins. Recombinant human IGF1 is a globular protein containing 70 amino acids, and 3 intra-molecular disulfide bonds.

<b>Catalog Number</b>	<b>1550-01</b>
<b>Product Name</b>	<b>IGF1, Rat</b> Recombinant Rat Insulin-like Growth Factor 1 IGF1 Somatomedin
<b>Source</b>	<i>Escherichia coli</i>
<b>MW</b>	~7.7 kDa (70 amino acid)
<b>Sequence</b>	GPETLCGAEL VDALQFVCGP RGFYFNKPTG YGSSIRRAPQ TGIVDECCFR SCDLRRLEMY CAPLKPTKSA
<b>Accession Number</b>	<a href="#">P08025</a>
<b>Purity</b>	>97% by SDS-PAGE and HPLC analyses
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 2 ng/ml, corresponding to a specific activity of >5.0 × 10 <sup>5</sup> IU/mg.
<b>Formulation</b>	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
<b>Storage/Handling</b>	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
<b>Reconstitution</b>	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.