

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, predominantly produced in the liver, that stimulate the proliferation and survival of various cell types, including muscle, bone and cartilage tissue *in vitro*. 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 (IGFIR). 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. This particular product has been labeled with the stable ¹⁵N isotope to help track its activity.

Catalog Number	1150-01N
Product Name	IGF1, 15N, Human Recombinant Human Insulin-like Growth Factor-1, ¹⁵ N Stable Isotope Labeled Somatomedin C, ¹⁵ N Stable Isotope Labeled
Source	<i>Escherichia coli</i>
MW	~7.7 kDa (70 amino acids)
Sequence	GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSRRAPQ TGIVDECCFR SCDLRRLEMY CAPLKPAKSA
Accession Number	P05019
Purity	>97% by SDS-PAGE and HPLC analyses
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ 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 ⁵ IU/mg.
Formulation	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
Storage/Handling	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.
Reconstitution	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.