

ChemWhat Recombinant Human Insulin-like Growth Factor-1,
A brand under Watson ¹⁵N Stable Isotope Labeled
(rHuIGF-1, ¹⁵N)

ChemWhat Technical Data Sheet (TDS)

Catalog Number:	105-01N
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 7743 Da, a single non-glycosylated polypeptide chain containing 70 amino acids. ¹⁵ N stable isotope labeled.
Quantity:	10µg/50µg/1000µg
AA Sequence:	GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSRRAPQ TGIVDECCFR SCDLRRLEMY CAPLKPAKSA
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.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.2.
Endotoxin:	Less than 1 EU/µg of rHuIGF-1, ¹⁵ N as determined by LAL method.
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage:	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 12 months from date of receipt, -20 to -70 °C as supplied.● 1 month, 2 to 8 °C under sterile conditions after reconstitution.● 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Usage:	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. NOT FOR HUMAN USE.

Human Insulin-like Growth Factor-1

The insulin-like growth factors (IGFs) belonged to the insulin gene family, are mitogenic polypeptide growth factors that stimulate the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. The IGFs are similar by structure and function to insulin, but have a much higher growth-promoting activity than insulin. IGF-1 is produced primarily by the liver as an endocrine hormone as well as in target tissues in a paracrine/autocrine fashion. The production of IGF-1 is stimulated by growth hormone (GH) and can be retarded by undernutrition, growth hormone insensitivity, lack of growth hormone receptors, or failures of the downstream signaling pathway post GH receptor including SHP2 and STAT5B. Recombinant human IGF-1 are globular proteins containing 70 amino acids and 3 intra-molecular disulfide bonds. Mature human IGF-1 shares 94 % and 96 % a.a. sequence identity with mouse and rat IGF-1, respectively, and exhibits cross-species activity.