

Recombinant Human Insulin-like Growth Factor-1, 15N Stable Isotope Labeled High purity

#R00126

Size: 10 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- A minimum of 12 months from date of receipt, when stored at $\leq -20^{\circ}\text{C}$ as supplied.
- 1 month, 2 to 8°C under sterile conditions after reconstitution.
- 3 months, -20 to -70°C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or

household product.

Background

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.

AA Sequence

GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSR
RAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKSA

Reconstitution

Prior to opening, it is recommended to centrifuge the vial briefly to bring the contents down the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. If animal-origin-free condition is expected in your product, then sterile distilled water is recommended. Stock solutions should be apportioned into working aliquots and stored at $\leq -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 7743 Da, a single non-glycosylated polypeptide chain containing 70 amino acids.
Purity	15N stable isotope labeled. >97% by SDS-PAGE analyses, >90% by RP-HPLC analyses.
Biological Activity	Testing in progress.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, 0.02% Tween-20, pH 7.0.
Endotoxin	Less than 0.1 EU/μg of rHuIGF-1, 15N as determined by

Shipping	LAL method. The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
----------	--