

Analytical Data Sheet

Lot number	9029255 not for drug use
Item number	4030778.0100
Product number	H-5555.0100
Product	IGF-I (human)

Description: The IGFs are mitogenic, polypeptide growth factors that stimulate the proliferation and survival of various cell types, including muscle, bone, and cartilage tissue *in vitro*. IGFs are predominantly produced by the liver, although a variety of tissues produce the IGFs at distinctive times. The IGFs belong to the Insulin gene family, which also contains insulin and relaxin. The IGFs are similar to insulin by structure and function, but have a much higher growth-promoting activity than insulin. IGF-II expression is influenced by placenta lactogen, while IGF-I expression is regulated by growth hormone. Both IGF-I and IGF-II signal through the tyrosine kinase type I receptor (IGF-IR), but IGF-II can also signal through the IGF-II/Mannose-6-phosphate receptor. Mature IGFs are generated by proteolytic processing of inactive precursor proteins, which contain N-terminal and C-terminal propeptide regions. Recombinant Human IGF-I and IGF-II are globular proteins containing 70 and 67 amino acids, respectively, and 3 intra-molecular disulfide bonds. The calculated molecular weight of Recombinant Human IGF-I is 7.7 kDa.

Sequence: GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSRRAPQ TGIVDECCFR SCDLRRLEMY CAPLKPAKSA

Source: E.coli

Physical Appearance: Sterile filtered white lyophilized powder

Purity: ≥98% by SDS-PAGE gel and HPLC analyses

Endotoxin level: <0.1 ng/μg of protein (<1EU/μg)

Protein Content: Verified by UV Spectroscopy and/or SDS-PAGE gel.

Biological Activity: The activity as determined by the dose-dependent proliferation of FDC-P1 typically starting at 1.0ng/ml

Formulation: Sterile filtered through a 0.2 micron filter. Lyophilized with no additives.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. Store at 4°C to 8°C for 1 week, or prepare for extended storage.

Storage/Stability: The lyophilized protein can be stored at -20°C to -80°C until December 2021. Stored at 4°C for 2-7 days. Stored at room temperature for 3 weeks. Reconstituted form at 4°C to 8°C for 1 week.

Extended storage: It is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA or BSA) and store in working aliquots at -20°C to -80°C. Avoid repeated freeze-thaw cycles.

Usage: For Research Use Only. Not for human use.