

**Recombinant Human IGF-I
(rhIGF-I)
Catalog Number: 105-01**

Description	The IGFs are mitogenic polypeptide growth factors that stimulate the proliferation and survival of various cell types including muscle, bone, and cartilage tissue <i>in vitro</i> . The liver predominantly produces IGFs, 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 by structure and function to insulin, 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. Proteolytic processing of inactive precursor proteins, which contain N-terminal and C-terminal propeptide regions, generates mature IGFs. Recombinant human IGF-I and IGF-II are globular proteins containing 70 and 67 amino acids, respectively, and 3 intramolecular disulfide bonds.
Synonyms	IGF1, IGF-1, IGFI, IGF1A, Somatamedin C, Mechano growth factor
AA Sequence	GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSRRAPQ TGIVDECCFR SCDLRRLEMY CAPLKPAKSA
Source	<i>Escherichia coli</i>
Molecular Weight	Approximately 7.6 kDa, a single non-glycosylated polypeptide chain containing 70 amino acids.
Purity	>95% by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active. The ED ₅₀ is < 2.0 ng/ml, corresponding to a specific activity of > 5 x 10 ⁵ units/mg, as determined by FDC-P1 cell proliferation.
Physical Appearance	White lyophilized powder.
Formulation	Lyophilized from a 0.2µm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.
Endotoxin	< 1EU/µg of growth factor as determined by LAL method.
Reconstitution	Reconstitute in sterile distilled water containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL.
Storage	Store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For maximal stability, aliquot and store at -20°C. Avoid repeated freeze/ thaw cycles.
Usage	This product is for research use only. It is not approved for use in humans, animals, or <i>in vitro</i> diagnostic procedures.