

IGF1

Recombinant Human IGF-I, Receptor Grade

Catalog No.	CU020	Quantity:	20 µg
	CU100		100 µg
	CM001		1.0 mg
	CM005		5.0 mg

Alternate Names: Insulin-like growth factor I, Mechano growth factor, MGF, Somatomedin-C

Description: 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 is globular protein containing 70 amino acids and 3 intra-molecular disulfide bonds. Mature human IGF-1 shares 94% and 96% aa sequence identity with mouse and rat IGF-1, respectively, and exhibits cross-species activity. **This is a high quality reagent for use in studies on cell growth, IGF receptors and IGFBPs.**

Uniprot ID: P05019

Gene ID: 3479

Source: *E. coli*

Molecular Weight: 7649 ± 2 Daltons (70 aa)

Formulation: Lyophilized from sterile-filtered 0.1M acetic acid, store under nitrogen at a slight vacuum.

Purity: ≥ 95% by HPLC analysis

Endotoxin Level: < 0.1 EU/µg as determined by LAL analysis

Biological Activity: EC₅₀ < 350 ng/ml, determined by proliferation of Chinese hamster ovary cell line (CHO)

Amino Acid Sequence: GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSRRAPQ TGIVDECCFR
SCDLRRLEMY CAPLKPAKSA

Reconstitution: See Protocol 1000 for Handling of IGF-1 and IGF-II analogs.

Storage & Stability: The lyophilized protein is stable as supplied for at least 1 year at 2-8°C.

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