

# HumanKine® IGF-I (Recombinant Human)



Animal Component-Free

Human cell expressed

Tag-Free

Endotoxin Free

## Product Description

The Insulin like growth factor-1, also known as Somatomedin-C is a growth factor which is structurally related to insulin and is an important regulator of growth and differentiation in various tissues and cell systems. Human IGF-1 is synthesized as two precursor isoforms with N- and alternate C-terminal propeptide. The two precursor isoforms are differentially expressed by various tissues. The proteolytic cleavage of the N- and C-terminal regions results in the mature IGF-1 protein which is identical between isoforms. IGF-1 binds to IGF-1 receptor and induces receptor autophosphorylation. This further phosphorylates Insulin receptor substrate -1 (IRS-1) and activates various downstream signaling pathways including the PI3-AKT, MAPK etc. (PMID: 17354613, 17113337, 29535161)

### Alternative Names

H-IGF-1, IGF, IGF-I, IGF-IA, IGF-IB, IGF1A, IGF1a, Insulin like growth factor, insulin-like growth factor 1 (somatomedin C), Insulin-like growth factor I, insulin-like growth factor IB, M-IGF-1, Mechano growth factor, MGF, OTTHUMP00000195084, R-IGF-1, Somatomedin C, Somatomedin-C

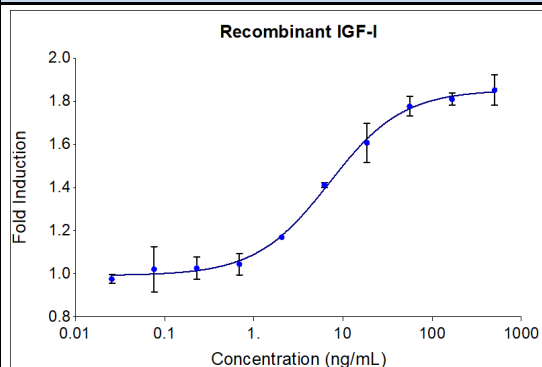
### Source

Human Embryonic Kidney cells (HEK293). HEK293-derived IGF-I protein

## Specifications

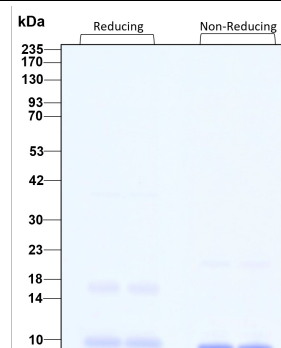
Test	Method	Specification
Activity	Dose-dependent proliferation of the MCF-7 human breast cancer cell line.	2-14 ng/mL
Molecular Mass	SDS-PAGE	9-10 kDa reduced and non-reduced, monomer, non-glycosylated
Purity	SDS-PAGE	>95%
Endotoxin	LAL	<1 EU/μg

## Activity Data



Recombinant human IGF-I (Cat no: HZ-1322) stimulates dose-dependent proliferation of the MCF-7 human breast cancer cell line. Cell number was quantitatively assessed by PrestoBlue® Cell Viability Reagent. MCF-7 cells were treated with increasing concentrations of recombinant IGF-I for 96 hours. The EC50 was determined using a 4-parameter non-linear

## SDS-PAGE



Preparation	
Shipping Temperature	ambient temperature
Formulation	50mM Acetate pH 4.0
Reconstitution	Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein to 0.2 mg/mL in sterile 1x PBS pH 7.4 containing 0.1% endotoxin-free recombinant human serum albumin (HSA). Gently swirl or tap vial to mix.

Stability and Storage	Product Form	Temperature Conditions	Storage Time (From Date of Receipt)
	Lyophilized	-20°C to -80°C	Until Expiry Date
	Lyophilized	Room Temperature	2 weeks
	Reconstituted as per CofA	-20°C to -80°C	6 months
	Reconstituted as per CofA	4°C	1 week
Avoid repeated freeze-thaw cycles.			

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