

# Recombinant Human IGF-1/IGF1 Protein

Catalog Number:PKSH032594



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

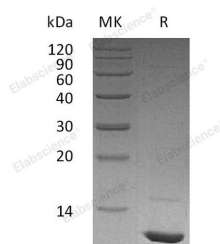
## Description

<b>Synonyms</b>	Insulin-Like Growth Factor I;IGF-I;Mechano Growth Factor;MGF;Somatomedin-C;IGF1;IBP1
<b>Species</b>	Human
<b>Expression Host</b>	E.coli
<b>Sequence</b>	Gly49-Ala118
<b>Accession</b>	P05019
<b>Calculated Molecular Weight</b>	7.6 kDa
<b>Tag</b>	None
<b>Bioactivity</b>	Measure by its ability to induce MCF-7 cells proliferation. The ED50 for this effect is 0.9-3.1ng/mL The, specific activity of recombinant human IGF-I is approximately $>1.2 \times 10^3$ IU/mg.

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 0.01 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



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## Background

Insulin-like growth factor I (IGF1) belongs to the family of insulin-like growth factors that are structurally homologous to proinsulin. Mature IGFs are generated by proteolytic processing of inactive precursor proteins; which contains the N- and C-terminal propeptide regions. Mature human IGF-I consisting of 70 amino acids has 94% identity with mouse IGF-I and exhibits cross-species activity. IGF-1 binds IGF-IR; IGF-IIR; and the insulin receptor and plays a key role in cell cycle progression; cell proliferation and tumor progression. IGF-1 expression is regulated by growth hormone. R3 IGF-1 is an

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83 amino acid analog of IGF-1 comprising the complete human IGF-1 sequence with the substitution of an Arg (R) for the Glu(E) at position three; hence R3; and a 13 amino acid extension peptide at the N terminus. R3 IGF-1 has been produced with the purpose of increasing biological activity. R3 IGF-1 is significantly more potent than human IGF-I in vitro.

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