

# Human IGF1, Tag Free Protein

HA210866



<b>Product name:</b>	Human IGF1, Tag Free
<b>Species reactivity:</b>	Human
<b>Bio-Activity:</b>	Testing in progress.
<b>Protein construction description:</b>	A DNA sequence encoding the human IGF1 protein (P05019-1) (Gly 49-Ala 118) was expressed with tag free.

**Background:** The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity. May be a physiological regulator of [1-14C]-2-deoxy-D-glucose (2DG) transport and glycogen synthesis in osteoblasts. Stimulates glucose transport in bone-derived osteoblastic (PyMS) cells and is effective at much lower concentrations than insulin, not only regarding glycogen and DNA synthesis but also with regard to enhancing glucose uptake. May play a role in synapse maturation. Ca<sup>2+</sup>-dependent exocytosis of IGF1 is required for sensory perception of smell in the olfactory bulb. Acts as a ligand for IGF1R. Binds to the alpha subunit of IGF1R, leading to the activation of the intrinsic tyrosine kinase activity which autophosphorylates tyrosine residues in the beta subunit thus initiating a cascade of down-stream signaling events leading to activation of the PI3K-AKT/PKB and the Ras-MAPK pathways. Binds to integrins ITGA5:ITGB3 and ITGA6:ITGB4. Its binding to integrins and subsequent ternary complex formation with integrins and IGFR1 are essential for IGF1 signaling. Induces the phosphorylation and activation of IGFR1, MAPK3/ERK1, MAPK1/ERK2 and AKT1.

<b>Purity:</b>	>95% as determined by SDS-PAGE.
<b>Endotoxin:</b>	Less than 1.0 EU per µg by the LAL method.
<b>Fragment region:</b>	IGF1 (49-118)
<b>Source:</b>	HEK293
<b>Accession:</b>	P05019-1
<b>Predicted molecular mass:</b>	8 kD
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.
<b>Reconstitution:</b>	Reconstitute at 250 µg/ml in sterile water.
<b>Storage:</b>	Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20°C to -80°C. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.

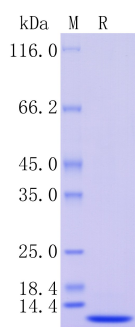
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**Fig1:** Protein on SDS-PAGE under reducing (R) condition.

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