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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# Recombinant Rat IGF protein (His tag)

Catalog Number: PDER100053



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

## Description

<b>Synonyms</b>	IGF1;IGFI;Igf1;Igf-1;Insulin-like growth factor I
<b>Species</b>	Rat
<b>Expression Host</b>	E.coli
<b>Sequence</b>	Gly 49-Ala 118-LVPRGF-Gly 49-Ala 118
<b>Accession</b>	P08025
<b>Calculated Molecular Weight</b>	7.6 kDa
<b>Observed molecular weight</b>	12 kDa
<b>Tag</b>	N-His

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	Please contact us for more information.
<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 sterile 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.

## 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 IGF1R are essential for IGF1 signaling. Induces the phosphorylation and activation of IGF1R, MAPK3/ERK1, MAPK1/ERK2 and AKT1 (By similarity).

## For Research Use Only

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