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IGF-I, Salmon

Catalog # PVGS1960

Product Information

Primary Accession	Q02815
Species	Salmon
Sequence	Expressed with an N-terminal Met. Gly45-Ala114
Purity	≥ 95% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	$ED_{50\ 50}$, the calculated specific activity is approximately >6.7 × 10^4 units/mg. It is recommended to experimentally determine the optimal concentration for each specific application by performing a dose response assay.
Expression System	E.coli
Theoretical Molecular Weight	7.7 kDa
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in H_2O up to 100 □g/ml.
Storage & Stability	Upon receiving, the lyophilized product remains stable for up to 6 months at lower than -70 °C. Upon reconstitution, the product is stable for up to 1 week at 4 °C or up to 3 months at -20 °C. Avoid repeated freeze-thaw cycles by making single-use aliquots before the solution is stored at -20 °C.

Additional Information

Gene ID	100136741
Other Names	Insulin-like growth factor 1, Insulin-like growth factor I, IGF-I, Somatomedin, igf1 {ECO:0000250|UniProtKB:P05019}
Target Background	Insulin-like growth factor 1 (IGF-1), also called Somatomedin, is a hormone similar in molecular structure to insulin but has a much higher growth-promoting activity. IGF-1 consists of 70 amino acids in a single chain with three intramolecular disulfide bridges. IGF-1 may be a physiological regulator of [1-14C]-2-deoxy-D-glucose (2DG) transport and glycogen synthesis in osteoblasts. It is able to stimulate 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. It may also play a role in synapse maturation.

Protein Information

Name	igf1 {ECO:0000250|UniProtKB:P05019}
Function	The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity. 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 initiatiating a cascade of down-stream signaling events leading to activation of the PI3K-AKT/PKB and the Ras-MAPK pathways. Binds to integrins. Its binding to integrins and subsequent ternary complex formation with integrins and IGFR1 are essential for IGF1 signaling.
Cellular Location	Secreted.