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Datasheet for ABIN2181262 IGF1 Protein (AA 49-118) (Fc Tag)

3 Images



Overview

Quantity:	100 µg
Target:	IGF1
Protein Characteristics:	AA 49-118
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This IGF1 protein is labelled with Fc Tag.

Product Details

Sequence:	AA 49-118
Characteristics:	This protein carries a human IgG1 Fc tag at the N-terminus. The protein has a calculated MW of 35 kDa. The protein migrates as 35 kDa under reducing (R) condition (SDS-PAGE).
Purity:	>98 % as determined by SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.
Target Details	
Target:	IGF1
Alternative Name:	IGF-I (IGF1 Products)

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Target Details	
Background:	Insulin-like growth factor 1 (IGF-1) is also known as somatomedin C, IGF1A, IGFI, sulfation factor, and is a hormone similar in molecular structure to insulin. It plays an important role in childhood growth and continues to have anabolic effects in adults. A synthetic analog of IGF-1, mecasermin is used for the treatment of growth failure. IGF-1 consists of 70 amino acids in a single chain with three intramolecular disulfide bridges. IGF-1 has a molecular weight of 7649 daltons. IGF-1 is produced primarily by the liver as an endocrine hormone as well as in target tissues in a paracrine/autocrine fashion. IGF-1 binds to at least two cell surface receptors: the Insulin-like growth factor 1 receptor, abbreviated as "IGF1R", and the insulin receptor. The IGF-1 receptor seems to be the "physiologic" receptor - it binds IGF-1 at significantly higher affinity than the IGF-1 that is bound to the insulin receptor. Like the insulin receptor, the IGF-1 receptor is a receptor tyrosine kinase - meaning it signals by causing the addition of a phosphate molecule on particular tyrosines. Its primary action is mediated by binding to its specific receptor IGF1R, present on many cell types in many tissues. Binding to the IGF1R, a receptor tyrosine kinase, initiates intracellular signaling, IGF-1 is one of the most potent natural activators of the AKT signaling pathway, a stimulator of cell growth and proliferation, and a potent inhibitor of programmed cell death. Insulin-like growth factor 1 has been shown to bind and interact with all the IGF-1 Binding Proteins (IGFBPS), of which there are six (IGFBP1-6). Specific references are provided for interactions with IGFBP3, IGFBP4 and IGFBP7.
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Pathways:	RTK Signaling, Intracellular Steroid Hormone Receptor Signaling Pathway, Peptide Hormone Metabolism, Hormone Activity, Regulation of Intracellular Steroid Hormone Receptor Signaling, Regulation of Hormone Metabolic Process, Regulation of Hormone Biosynthetic Process, Stem Cell Maintenance, Glycosaminoglycan Metabolic Process, Regulation of Carbohydrate Metabolic Process, Autophagy, Smooth Muscle Cell Migration, Activated T Cell Proliferation, Positive Regulation of fat Cell Differentiation
Application Details	
Restrictions: Handling	For Research Use only
Format:	Lyophilized
Buffer:	50 mM Tris, 100 mM Glycine, pH 7.5

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Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C
Storage Comment:	No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C-8 °C), After
	reconstitution under sterile conditions for 1 month (4 °C-8 °C) or 3 months (-20 °C to -70 °C).

Images



ELISA

Image 1. Immobilized Human IGF-I R, His Tag (ABIN2181261,ABIN2181260) at 5 μ g/mL (100 μ L/well) can bind Human IGF-I, Fc Tag (ABIN2181263,ABIN2181262) with a linear range of 0.039-0.313 μ g/mL (Routinely tested).

SDS-PAGE

Image 2. Human IGF-I, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 98%.

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Images



Binding Studies

Image 3. Immobilized Human IGF-I, Fc Tag (Cat# IG1-H4269) at 5 μ g/mL (100 μ I/well),can bind Human IGFBP-3, His Tag (Cat# IG3-H5229) with a linear range of 0.03-0.25 μ g/mL.

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