Datasheet for ABIN4949023

IGF2 Protein (AA 25-91) (AVI tag,Fc Tag,Biotin)

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2 Images

Overview

Quantity:	200 µg
Target:	IGF2
Protein Characteristics:	AA 25-91
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This IGF2 protein is labelled with AVI tag,Fc Tag,Biotin.
Application:	Functional Studies (Func)

Product Details

Brand:	MABSol®,PrecisionAvi
Sequence:	AA 25-91
Specificity:	Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.
Characteristics:	This protein carries an Avi tag (Avitag™) at the N-terminus, followed by a human IgG1 Fc tag. The protein has a calculated MW of 35.4 kDa. As a result of glycosylation, the protein migrates as 40 kDa under reducing (R) condition, and 66 kDa under non-reducing (NR) condition (SDS-PAGE).
Purity:	>95 % as determined by SDS-PAGE.

Product Details

Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	IGF2
Alternative Name:	IGF-II (IGF2 Products)
Background:	Insulin-like growth factor 2 (IGF-2) is also known as Somatomedin-A, IGF-II, PP9974, and is one of three protein hormones that share structural similarity to insulin. IGF-2 exerts its effects by binding to the IGF-1 receptor. IGF2 may also bind to the IGF-2 receptor (also called the cation-independent mannose 6-phosphate receptor), which acts as a signalling antagonist, that is, to prevent IGF2 responses. The major role of IGF2 is as a growth promoting hormone during gestation. In the process of Folliculogenesis, IGF2 is created by Theca cells to act in an autocrine manner on the theca cells themselves, and in a paracrine manner on Granulosa cells in the ovary. IGF2 promotes granulosa cell proliferation during the follicular phase of the menstrual cycle, acting alongside Follicle Stimulating Hormone (FSH). After ovulation has occurred, IGF-2 promotes progesterone secretion during the luteal phase of the menstrual cycle together with Luteinizing Hormone (LH). Thus, IGF2 acts as a Co-hormone together with both FSH and LH. IGF-2 may play a key role in memory and could potentially be used to treat Alzheimer's Disease. It is sometimes produced in excess in islet cell tumours, causing hypoglycemia. Doege-Potter syndrome is a paraneoplastic syndrome in which hypoglycemia is associated with the presence of one or more non-islet fibrous tumors in the pleural cavity. has been shown to interact with IGFBP3 and Transferrin.
Molecular Weight:	35.3 kDa
Gene ID:	18, 17
Pathways:	Hormone Activity, Regulation of Hormone Metabolic Process, Regulation of Hormone Biosynthetic Process, Regulation of Carbohydrate Metabolic Process, Activated T Cell Proliferation

Application Details

Comment:	Ready-to-use AvitagTM biotinylated protein: The product is exclusively produced using the AvitagTM technology. Briefly, a unique 15 amino acid peptide, the Avi tag, is introduced into the recombinant protein during expression vector construction. The single lysine residue in the Avi tag is enzymatically biotinylated by the E. Coli biotin ligase BirA.

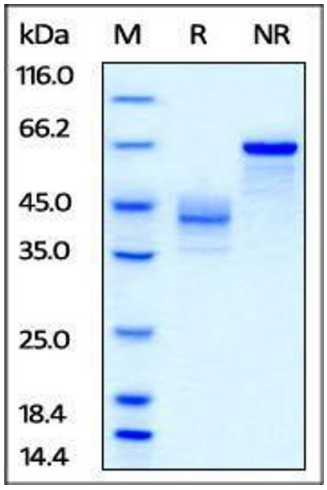
Application Details

	This single-point enzymatic labeling technique brings many advantages for commonly used binding assays. The biotinylation happens on the lysine residue of Avi tag, and therefore does NOT interfere with the target protein's natural binding activities. In addition, when immobilized on an avidin-coated surface, the protein orientation is uniform because the position of the Avi tag in the protein is precisely controlled.
Restrictions:	For Research Use only

Handling

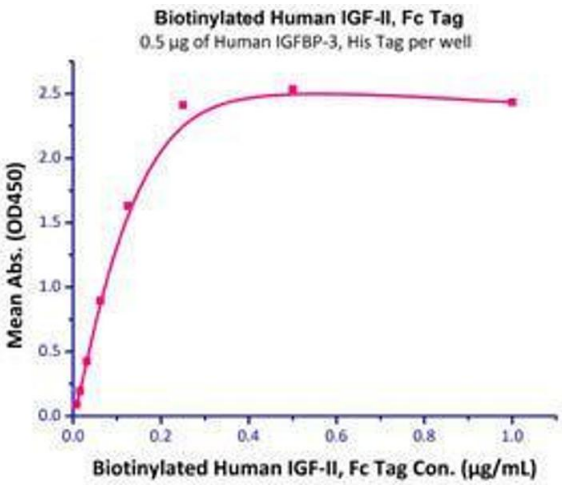
Format:	Lyophilized
Buffer:	Tris with Glycine, Arginine and NaCl, pH 7.5
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C

Images



SDS-PAGE

Image 1. Biotinylated Human IGF-II, Fc Tag on SDS-PAGE under reducing (R) and no-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



Binding Studies

Image 2. Immobilized Human IGFBP-3, His Tag (Cat# IG3-H5229) at 5 µg/mL (100 µl/well) can bind Biotinylated Human IGF-II, Fc Tag (Cat# IG2-H82F9) with a linear range of 0.008-0.1 µg/mL.