

Recombinant human Adiponectin protein ab78588

3 Images

Description

Product name	Recombinant human Adiponectin protein
Biological activity	Biological Activity: Adiponectin is fully biologically active when compared to standard. Activity is determined by the ability to inhibit the proliferation of mouse M1 cells. The expected ED ₅₀ for this effect is 1.0 - 2.5 µg/ml.
Purity	> 95 % SDS-PAGE. Purity Approximately 90% as determined by: - Analysis by RP-HPLC. - Reducing and non-reducing SDS-PAGE. This product was filter sterilised.
Expression system	Escherichia coli
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MKGEPGEGAYVYRSAFSVGL ETYVTIPNMP IRFTKIFYNQ QNHYDGSTGK FHCNIPGLYY FAYHITVYMK DVKVSFLFKKD KAMLFTYDQY QENNVDQASG SVLLHLEVGD QVWLQVYGEGERNGLYADND NDSTFTGFLL YHDTN
Amino acids	101 to 244

Specifications

Our **Abpromise guarantee** covers the use of **ab78588** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE
Form	Lyophilized
Additional notes	For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. Constituents: 0.01155% DTT, 0.121% Tris
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This product is an active protein and may elicit a biological response in vivo, handle with caution.

Reconstitution

Reconstitute with sterile 5 mM Tris, pH 8.0 + 0.75 mM DTT at 0.1 - 1.0 mg/ml, which can then be further diluted to other aqueous solutions.

General Info

Function

Important adipokine involved in the control of fat metabolism and insulin sensitivity, with direct anti-diabetic, anti-atherogenic and anti-inflammatory activities. Stimulates AMPK phosphorylation and activation in the liver and the skeletal muscle, enhancing glucose utilization and fatty-acid combustion. Antagonizes TNF-alpha by negatively regulating its expression in various tissues such as liver and macrophages, and also by counteracting its effects. Inhibits endothelial NF-kappa-B signaling through a cAMP-dependent pathway. May play a role in cell growth, angiogenesis and tissue remodeling by binding and sequestering various growth factors with distinct binding affinities, depending on the type of complex, LMW, MMW or HMW.

Tissue specificity

Synthesized exclusively by adipocytes and secreted into plasma.

Involvement in disease

Defects in ADIPOQ are the cause of adiponectin deficiency (ADPND) [MIM:612556]. ADPND results in very low concentrations of plasma adiponectin. Genetic variations in ADIPOQ are associated with non-insulin-dependent diabetes mellitus (NIDDM) [MIM:125853]; also known as diabetes mellitus type 2. NIDDM is characterized by an autosomal dominant mode of inheritance, onset during adulthood and insulin resistance.

Sequence similarities

Contains 1 C1q domain.
Contains 1 collagen-like domain.

Domain

The C1q domain is commonly called the globular domain.

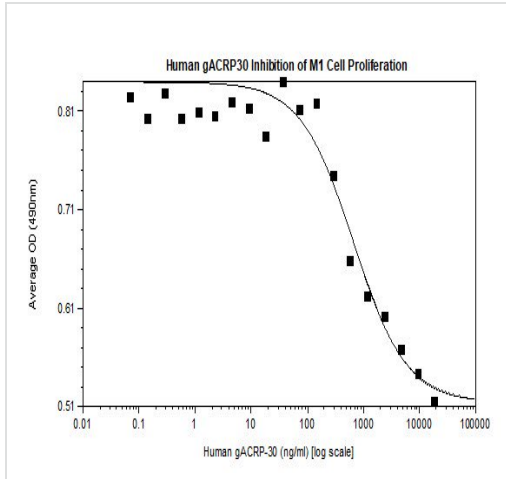
Post-translational modifications

Hydroxylated Lys-33 was not identified in PubMed:16497731, probably due to poor representation of the N-terminal peptide in mass fingerprinting. HMW complexes are more extensively glycosylated than smaller oligomers. Hydroxylation and glycosylation of the lysine residues within the collagen-like domain of adiponectin seem to be critically involved in regulating the formation and/or secretion of HMW complexes and consequently contribute to the insulin-sensitizing activity of adiponectin in hepatocytes. O-glycosylated. Not N-glycosylated. O-linked glycans on hydroxylysines consist of Glc-Gal disaccharides bound to the oxygen atom of post-translationally added hydroxyl groups. Sialylated to varying degrees depending on tissue. Thr-22 appears to be the major site of sialylation. Higher sialylation found in SGBS adipocytes than in HEK fibroblasts. Sialylation is not required neither for heterodimerization nor for secretion. Not sialylated on the glycosylated hydroxylysines. Desialylated forms are rapidly cleared from the circulation.

Cellular localization

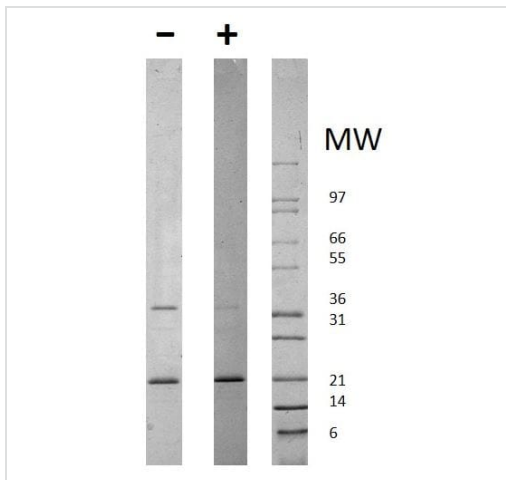
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Images



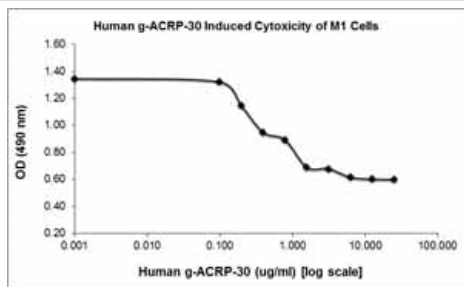
Functional analysis of ab78588

Functional Studies - Recombinant human
Adiponectin protein (ab78588)



SDS PAGE analysis of ab78588 under non-reducing (-) and
reducing (+) conditions. Stained with Coomassie Blue.

SDS-PAGE - Recombinant human Adiponectin
protein (ab78588)



ab78588 used in Functional Studies.

Functional Studies - Recombinant human
Adiponectin protein (ab78588)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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