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Product datasheet

Recombinant human Adiponectin protein ab157078

1 Image

Description

Product name	Recombinant human Adiponectin protein
Biological activity	Activates AMPK.
Purity	>= 90 % SDS-PAGE.
Endotoxin level	< 0.100 Eu/µg
Expression system	HEK 293 cells
Accession	**Q15848**
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	ETTTQGPGVLLPLPKGACTGWMAGIPGHPGHNGAPGRD GRDGTPGEKGEK GDPGLIGPKGDIGETGVPGAEGPRGFPGIQGRKGEPGEG AYVYRSAFSVG LETYVTIPNMPIRFTKIFYNQQNHYDGSTGKFHCNIPGLYYFA YHITVYM KDVKVSLFKKDKAMLFTYDQYQENNVDQASGSVLLHLEV GDQVWLQVYGE GERNGLYADNDNDSTFTGFLLYHDTN
Predicted molecular weight	33 kDa including tags
Amino acids	16 to 244
Tags	DDDDK tag N-Terminus
Additional sequence information	Fused at the N-terminus to a linker peptide (14 aa) and a DDDDK tag.

Specifications

Our **Abpromise guarantee** covers the use of **ab157078** in the following tested applications.

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

Applications	Functional Studies
	SDS-PAGE
Form	Lyophilized

Additional notes	Mimics serum adiponectin by forming high molecular weight (HMW) and hexameric species.

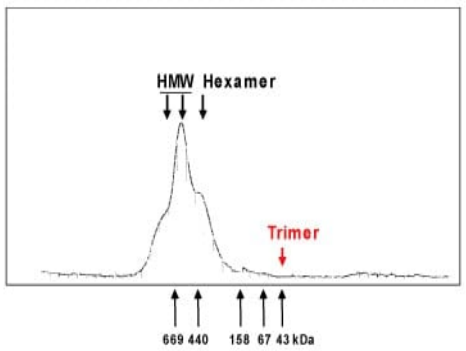
Preparation and Storage

Stability and Storage	Shipped at 4°C. Store at -20°C. Constituent: 99% PBS This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	Reconstitute with 50µl sterile distilled water. Further dilutions should be made with medium containing 5% fetal calf serum or other carrier protein. After reconstitution, prepare aliquots and store at -20°C. Avoid freeze/thaw cycles.

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 collagene-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	Secreted.

Images



Functional Studies - Recombinant human Adiponectin protein (ab157078)

Size exclusion chromatographyof ab157078. The different forms of adiponectin are indicated by arrows: High molecular weight (HMW; representing 12-18-mer species) and hexamer. The red arrow indicates were one should elute the trimeric state of adiponectin.

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

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