

Product datasheet

Recombinant human Adiponectin protein ab157078

1 Image

Overview

<b>Product name</b>	Recombinant human Adiponectin protein
<b>Protein length</b>	Full length protein

Description

<b>Nature</b>	Recombinant
<b>Source</b>	HEK 293 cells
<b>Amino Acid Sequence</b>	
<b>Accession</b>	<a href="#">Q15848</a>
<b>Species</b>	Human
<b>Sequence</b>	<p>ETTTQGPGVLLPLPKGACTGWMAGIPGHPGHNGAPG  RDGRDGTPGEKGEK  GDPGLIGPKGDIGETGVPGAEGPRGFPGIQGRKGEPG  EGAYVYRSAFSVG  LETYVTIPNMPIRFTKIFYNQNNHYDGSTGKFHCNIPGLY  YFAYHITVYM  KDVKVSFLFKKDKAMLFTYDQYQENNVDAQSGSVLLHL  EVGDQVWLQVYGE  GERNGLYADNDNDSTFTGFLLYHDTN</p>
<b>Molecular weight</b>	33 kDa including tags
<b>Amino acids</b>	16 to 244
<b>Tags</b>	DDDDK tag N-Terminus
<b>Additional sequence information</b>	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.

<b>Biological activity</b>	Activates AMPK.
<b>Applications</b>	Functional Studies SDS-PAGE

<b>Endotoxin level</b>	< 0.100 Eu/μg
<b>Purity</b>	>= 90 % SDS-PAGE.
<b>Form</b>	Lyophilised
<b>Additional notes</b>	Mimics serum adiponectin by forming high molecular weight (HMW) and hexameric species.

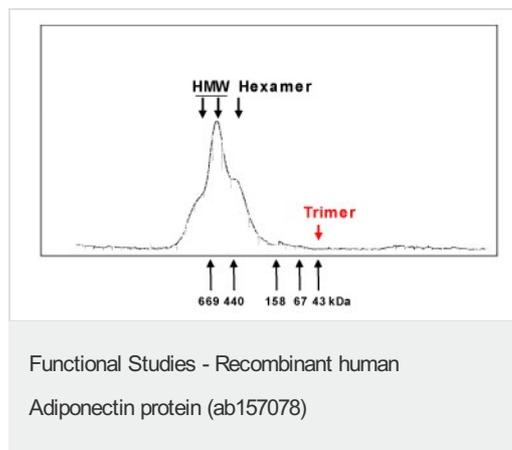
## Preparation and Storage

<b>Stability and Storage</b>	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.
<b>Reconstitution</b>	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

<b>Function</b>	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.
<b>Tissue specificity</b>	Synthesized exclusively by adipocytes and secreted into plasma.
<b>Involvement in disease</b>	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.
<b>Sequence similarities</b>	Contains 1 C1q domain. Contains 1 collagen-like domain.
<b>Domain</b>	The C1q domain is commonly called the globular domain.
<b>Post-translational modifications</b>	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.

## Images



Size exclusion chromatography of 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 where 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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