

## Recombinant Mouse Adiponectin (trimer)

<b>Type:</b>	Recombinant	<b>Cat. No.:</b>	42013
<b>Tag:</b>	Flag	<b>Size:</b>	0.1 mg
<b>Source:</b>	HEK293	<b>Purity:</b>	>90%
<b>Other names:</b>	Acrp30, GBP28, AdipoQ	<b>Species:</b>	Mouse

### Introduction to the Molecule

Adiponectin, also known as apM1, Acrp30, GBP28 and adipoQ, is a circulating hormone predominantly produced from adipose tissue. Many pharmacological studies demonstrated that this protein possesses potent anti-diabetic, anti-atherogenic and anti-inflammatory functions. Supplement of adiponectin protein can decrease blood glucose, improve insulin sensitivity, alleviate fatty liver and prevent atherosclerosis. The protein is post-translationally modified by hydroxylation and glycosylation, and forms three different oligomeric complexes in the circulation. Many clinical studies demonstrated that plasma adiponectin is a useful biomarker for metabolic syndrome, nonalcoholic steatohepatitis and certain type of cancers. Decreased circulating levels of plasma adiponectin (hypoadiponectinaemia) are associated with increased body mass index (BMI), decreased insulin sensitivity, less favourable plasma lipid profiles, increased levels of inflammatory markers and increased risk for the development of type 2 diabetes, hypertension, and coronary heart diseases. Low adiponectin concentrations were found to be predictive of a future reduction in insulin sensitivity and cardiovascular disorders. Administration of the anti-diabetic drugs thiazolidinediones (TZDs) raises circulating adiponectin levels. In addition, low plasma adiponectin levels are also associated with nonalcoholic steatohepatitis (NASH) and certain types of cancers.

### Description

Total 238 AA. Mw: 25.9kDa (calculated). C-terminal flag-tag, 8 extra AA(highlighted). The cysteine 39 was replaced with alanine (C39A). mAd-C39A can only form trimer, but not hexamer or HMW form.

### Amino Acid Sequence

EDDVTTTEEL	APALVPPPKG	<b>TA</b> AGWMAGIP	GHPGHNGTPG	RDGRDGTPE
KGEKGDAGLL	GPKGETGDVG	MTGAEGPRGF	PGTPGRKGEP	GEAAYMYRSA
FSVGLETRVT	VPNVPIRFTK	IFYNQQNHYD	GSTGKFYCNI	PGLYYFSYHI
TVYMKDVKVS	LFKKDKAVLF	TYDQYQEKV	DQASGSVLLH	LEVGDQVWLQ
VYGDGDHNGL	YADNVNDSTF	TGFLLYHDTN	<b>DYKDDDDK</b>	

### Formulation

Lyophilized in 1 mg/mL in PBS.

## Reconstitution

Add deionized water to prepare a working stock solution of approximately 1 mg/mL and let the lyophilized pellet dissolve completely.

## Storage

Store lyophilized protein at  $-20^{\circ}\text{C}$ . Aliquot reconstituted protein and store at  $-80^{\circ}\text{C}$ . Avoid repeated freezing /thawing cycles.

## Applications

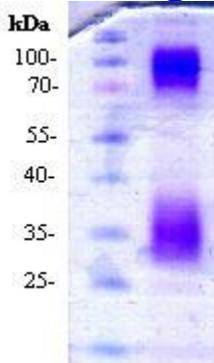
Binding assay, ELISA, Ex vivo and in vivo activity analysis, Western blotting.

## Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

## SDS-PAGE gel



12%SDS-PAGE separation of Mouse Adiponectin, Trimeric form  
1. M.W. marker  
2. non-reduced and non-heated sample