abcam

Product datasheet

Mouse Adiponectin ELISA Kit ab108785

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Overview

Product name Mouse Adiponectin ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Overall				7.5%

Inter-assay

Sample	n	Mean	SD	CV%
Overall				10.8%

Sample type Cell culture supernatant, Urine, Serum, Plasma, Tissue Lysate

Assay type Sandwich (quantitative)

Sensitivity = 0.23 ng/ml

Range 1.5 ng/ml - 6 ng/ml

Recovery 100 %

Assay time 4h 00m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Mouse

Product overview Adiponectin Mouse *in vitro* ELISA (enzyme-linked immunosorbent assay) kit is designed for the quantitative measurement of Adiponectin levels in urine, plasma, serum and cell culture supernatants.

An Adiponectin specific antibody has been precoated onto 96-well plates and blocked. Standards or test samples are added to the wells and subsequently an Adiponectin specific biotinylated detection antibody is added and then followed by washing with wash buffer. Streptavidin-Peroxidase Conjugate is added and unbound conjugates are washed away with wash buffer. TMB is then used to visualize Streptavidin-Peroxidase enzymatic reaction. TMB is catalyzed by Streptavidin-Peroxidase to produce a blue color product that changes into yellow after adding acidic stop solution. The density of yellow coloration is directly proportional to the amount of Adiponectin captured in plate.

The entire kit may be stored at -20°C for long term storage before reconstitution - Avoid repeated freeze-thaw cycles.

Platform Microplate

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	1 x 96 tests
100X Streptavidin-Peroxidase Conjugate	1 x 80µl
10X Diluent N Concentrate	1 x 30ml
20X Wash Buffer Concentrate	2 x 30ml
50X Biotinylated Mouse Adiponectin Antibody	1 x 120µl
Adiponectin Microplate (12 x 8 well strips)	1 unit
Adiponectin Standard	1 vial
Chromogen Substrate	1 x 7ml
Sealing Tapes	3 units
Stop Solution	1 x 11ml

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.

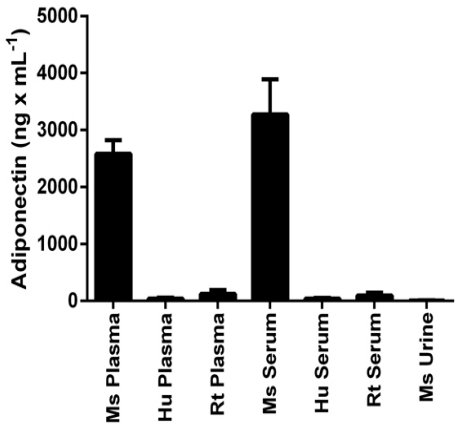
Domain The C1q domain is commonly called the globular domain.

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.

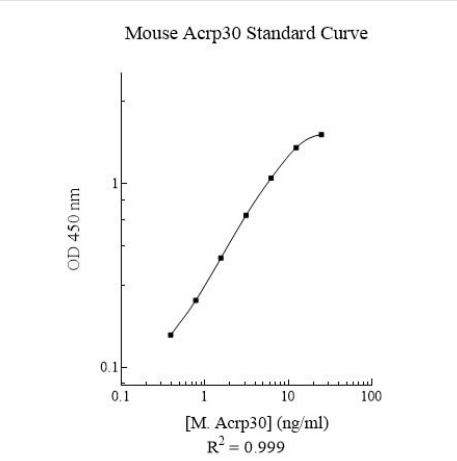
Cellular localization Secreted.

Images



Sandwich ELISA - Adiponectin Mouse ELISA kit (ab108785)

Adiponectin measured in biological fluids with background signal subtracted (duplicates +/- SD).



Typical Standard Curve

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