Product datasheet

Human Adiponectin ELISA Kit ab108786

Overview

- **Product name**: Human Adiponectin ELISA Kit
- **Detection method**: Colorimetric
- **Precision**
  - **Intra-assay**
    | Sample | n | Mean | SD | CV% |
    |--------|---|------|----|-----|
    | Overall|   |      |    | 3%  |
  - **Inter-assay**
    | Sample | n | Mean | SD | CV% |
    | Overall|   |      |    | 8.3%|

- **Sample type**: Cell culture supernatant, Saliva, Milk, Urine, Serum, Plasma
- **Assay type**: Sandwich (quantitative)
- **Sensitivity**: = 0.7 ng/ml
- **Range**: 0.781 ng/ml - 50 ng/ml
- **Recovery**: 99%
- **Assay time**: 3h 00m
- **Assay duration**: Multiple steps standard assay
- **Species reactivity**: Reacts with: Human
- **Product overview**: Abcam’s Adiponectin Human in vitro ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Adiponectin levels in urine, plasma, serum, and milk, saliva, and cell culture supernatants. (UniprotID: Q15848)

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 Albumin specific biotinylated detection antibody is added and then followed by washing with wash buffer. Streptavidin-Peroxidase Complex 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 Albumin captured in plate.
**Tested applications**

**Suitable for:** Sandwich ELISA

**Platform**

Microplate

---

**Properties**

**Storage instructions**

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

<table>
<thead>
<tr>
<th>Components</th>
<th>1 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>100X Streptavidin-Peroxidase Conjugate</td>
<td>1 x 80µl</td>
</tr>
<tr>
<td>10X Diluent N Concentrate</td>
<td>1 x 30ml</td>
</tr>
<tr>
<td>1X Standard Diluent</td>
<td>1 x 2ml</td>
</tr>
<tr>
<td>20X Wash Buffer Concentrate</td>
<td>2 x 30ml</td>
</tr>
<tr>
<td>50X Biotinylated Human Adiponectin Antibody</td>
<td>1 x 120µl</td>
</tr>
<tr>
<td>Adiponectin Microplate (12 x 8 well strips)</td>
<td>1 unit</td>
</tr>
<tr>
<td>Adiponectin Standard</td>
<td>1 vial</td>
</tr>
<tr>
<td>Chromogen Substrate</td>
<td>1 x 8ml</td>
</tr>
<tr>
<td>Sealing Tapes</td>
<td>3 units</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>1 x 12ml</td>
</tr>
</tbody>
</table>

**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**

Secreted.

**Applications**

Our **Abpromise guarantee** covers the use of **ab108786** in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandwich ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

**Images**

Representative Standard Curve using ab108786

![Typical Standard Curve](image)

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

**Our Abpromise to you: Quality guaranteed and expert technical support**

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit [https://www.abcam.com/abpromise](https://www.abcam.com/abpromise) or contact our technical team.
Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors