



# Human Adipose Triglyceride Lipase,ATGL ELISA kit

|                                     |                                                                                                                                                                                                    |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Code</b>                 | CSB-E12688h                                                                                                                                                                                        |
| <b>Protein Biological Process 2</b> | Lipogenesis and lipometabolism                                                                                                                                                                     |
| <b>Abbreviation</b>                 | PNPLA2                                                                                                                                                                                             |
| <b>Protein Biological Process 1</b> | Biosynthesis/Metabolism                                                                                                                                                                            |
| <b>Target Name</b>                  | patatin-like phospholipase domain containing 2                                                                                                                                                     |
| <b>Uniprot No.</b>                  | Q96AD5                                                                                                                                                                                             |
| <b>Alias</b>                        | 1110001C14Rik, ATGL, DESNUTRIN, DKFZp667M109, FP17548, PEDF-R, TTS-2.2, TTS2, adipose triglyceride lipase pigment epithelium-derived factor transport-secretion protein 2.2 triglyceride hydrolase |
| <b>Product Type</b>                 | ELISA Kit                                                                                                                                                                                          |
| <b>Immunogen Species</b>            | Homo sapiens (Human)                                                                                                                                                                               |
| <b>Protein Biological Process 3</b> | Lipid degradation                                                                                                                                                                                  |
| <b>Sample Types</b>                 | serum, urine, tissue homogenates                                                                                                                                                                   |
| <b>Detection Range</b>              | 6.25 mIU/mL-400 mIU/mL                                                                                                                                                                             |
| <b>Sensitivity</b>                  | 1.56 mIU/mL                                                                                                                                                                                        |
| <b>Assay Time</b>                   | 1-5h                                                                                                                                                                                               |
| <b>Sample Volume</b>                | 50-100ul                                                                                                                                                                                           |
| <b>Detection Wavelength</b>         | 450 nm                                                                                                                                                                                             |
| <b>Lead Time</b>                    | 3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.                                                                                           |
| <b>Research Area</b>                | Metabolism                                                                                                                                                                                         |
| <b>Gene Names</b>                   | PNPLA2                                                                                                                                                                                             |
| <b>Tag Info</b>                     | quantitative                                                                                                                                                                                       |
| <b>Protein Description</b>          | Sandwich                                                                                                                                                                                           |

## Description

This human ATGL ELISA kit employs the quantitative sandwich enzyme immunoassay technique to measure the levels of human ATGL in different samples, including serum, urine, or tissue homogenates. The enzyme-substrate chromogenic reaction is also used to amplify the signal and quantify the levels of the analyte through the intensity of the colored product. The color intensity positively correlates with the amount of ATGL bound in the initial step.



ATGL is a triglyceride lipase that catalyzes the initial step in adipose triglyceride (TG) lipolysis, cooperating with other enzymes to hydrolyze TG to produce fatty acids (FAs) that are crucial energy substrates, precursors for the generation of membrane lipids, and ligands of nuclear receptors. It plays an important role in whole-body energy homeostasis. In addition to mobilizing TG for energy production, ATGL also affects obesity and adipose tissue inflammation, heart failure protection, glucose homeostasis, as well as thermoregulation.

**Product Precision**

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

**Linearity**

To assess the linearity of the assay, samples were spiked with high concentrations of human ATGL in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

|     |           |            |
|-----|-----------|------------|
| ?   | Sample    | Serum(n=4) |
|     | Average % | 88         |
| 1:1 | Range %   | 82-95      |
|     | Average % | 96         |
| 1:2 | Range %   | 90-100     |
|     | Average % | 93         |
| 1:4 | Range %   | 88-105     |
|     | Average % | 95         |
| 1:8 | Range %   | 82-110     |

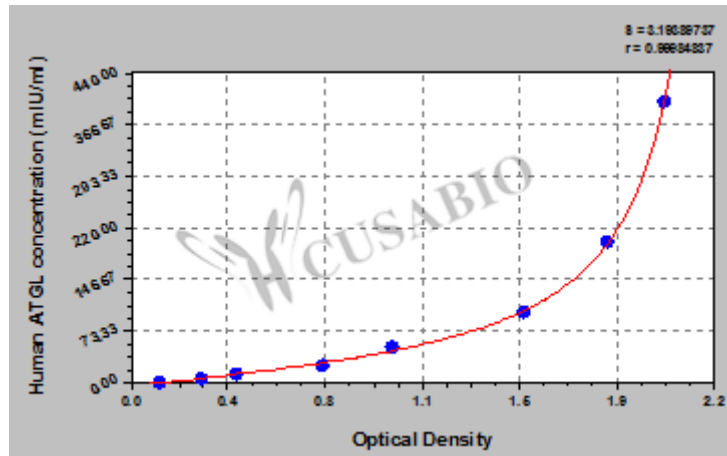
**Recovery**

The recovery of human ATGL spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

| Sample Type | Average % Recovery | Range  |
|-------------|--------------------|--------|
| Serum (n=5) | 95                 | 82-103 |

**Typical**

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



| mIU/ml | OD1   | OD2   | Average | Corrected |
|--------|-------|-------|---------|-----------|
| 400    | 2.083 | 1.992 | 2.038   | 1.916     |
| 200    | 1.854 | 1.796 | 1.825   | 1.703     |
| 100    | 1.529 | 1.484 | 1.507   | 1.385     |
| 50     | 1.038 | 0.976 | 1.007   | 0.885     |
| 25     | 0.771 | 0.709 | 0.740   | 0.618     |
| 12.5   | 0.429 | 0.395 | 0.412   | 0.290     |
| 6.25   | 0.286 | 0.269 | 0.278   | 0.156     |
| 0      | 0.124 | 0.119 | 0.122   | ?         |

## Msd

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