### Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Triglyceride Assay Kit - Quantification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Colorimetric/Fluorometric</td>
</tr>
<tr>
<td>Sample type</td>
<td>Urine, Serum, Plasma, Other biological fluids, Tissue Extracts, Cell Lysate</td>
</tr>
<tr>
<td>Assay type</td>
<td>Quantitative</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>&gt; 2 µM</td>
</tr>
<tr>
<td>Assay time</td>
<td>1h 20m</td>
</tr>
</tbody>
</table>

### Product overview

Triglyceride Assay Kit (ab65336) is a sensitive, easy assay to measure triglyceride concentration in mammalian samples. In the triglyceride assay protocol, triglycerides are converted to free fatty acids and glycerol. Glycerol is then oxidized to generate a product which reacts with a probe to generate color (spectrophotometry at \( \lambda = 570 \) nm) and fluorescence (Ex/Em = 535/587 nm).

Triglyceride assay protocol summary:
- add samples and standards to wells
- add assay buffer and lipase, and incubate for 20 min
- add triglyceride reaction mix and incubate for 60 min
- analyze with microplate reader

Please note: the general range is 0-10 nmol (colorimetric) and 0-1 nmol (fluorometric).

If your sample contains reducing substances, they are likely to interfere with the assay. In this case, we recommend using Triglyceride Assay Kit (Fluorometric, Reducing samples) ab178780.

### Target background

Triglycerides are the main constituent of vegetable oil, animal fat, LDL and VLDL, and play an important role as transporters of fatty acids as well as serving as an energy source. Triglycerides are broken down into fatty acids and glycerol, after which both can serve as substrates for energy producing and metabolic pathways. High blood levels of triglycerides are implicated in atherosclerosis, heart disease and stroke as well as in pancreatitis.

Review our Metabolism Assay Guide to learn about assays for metabolites, metabolic enzymes,
mitochondrial function, and oxidative stress, and also about how to assay metabolic function in live cells using your plate reader.

**Notes**

This product is manufactured by BioVision, an Abcam company and was previously called K622 Triglyceride Quantification Colorimetric/Fluorometric Kit. K622-100 is the same size as the 100 test size of ab65336.

**How other researchers have used Triglyceride Assay Kit ab65336**

The Triglyceride assay kit has been used in publications in a variety of sample types, including:
- Human: serum\(^1\), plasma\(^2\), mammary epithelial and mammary cancer cell line lysate\(^3\), Huh7.5 hepatocyte-derived cell line lysate\(^4\), primary liver cell line lysates\(^5\), sebocyte cell culture lysates\(^6\)
- Mouse: hepatocyte cell lysates\(^7\), liver extract\(^8\), serum\(^9\), plasma\(^10\), kidney extracts\(^11\), liver tissue and serum\(^12\), cardiac tissue extracts\(^13\)
- Rat: liver tissue extract\(^14\), plasma\(^15\)
- Drosophila\(^16\)


Abcam has not and does not intend to apply for the REACH Authorisation of customers’ uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

**Platform**

Microplate reader

**Properties**

**Storage instructions**

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

<table>
<thead>
<tr>
<th>Components</th>
<th>100 tests</th>
<th>2000 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assay Buffer V</td>
<td>1 x 25ml</td>
<td>20 x 25ml</td>
</tr>
<tr>
<td>Cholesterol Esterase</td>
<td>1 vial</td>
<td>20 vials</td>
</tr>
<tr>
<td>Enzyme Mix VI</td>
<td>1 vial</td>
<td>20 vials</td>
</tr>
<tr>
<td>OxiRed™ Probe</td>
<td>1 x 200µl</td>
<td>20 x 200µl</td>
</tr>
<tr>
<td>Triglyceride Standard</td>
<td>1 x 300µl</td>
<td>20 x 300µl</td>
</tr>
</tbody>
</table>
Hepatic triglyceride levels was measured using ab65336 in male and female wild-type (WT) or AT2KO (knockout) mice with either normal diet (ND) or high fat diet (HFD).

Image from Samuel P et al., PLoS One 8(1), Fig 7b. doi: 10.1371/journal.pone.0048425. Reproduced under the Creative Commons license http://creativecommons.org/licenses/by/4.0/

Fluorometric triglyceride standard curve: mean of duplicates (+/- SD) with background reads subtracted.

Triglyceride Quantification Kit (ab65336)
Triglyceride measured in cell culture lysates showing quantity (nmol) per 1 mln cells.

Samples with the concentration of 1e7 cells/mL were used.
Samples were diluted 40-80 fold and measured fluorometrically.

HepG2 cells were treated with 25 uM Chloroquine for 72h.

Please note: All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

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