

## Product datasheet

# Alanine Transaminase Activity Assay Kit (Colorimetric/Fluorometric) ab105134

★★★★★ [2 Abreviews](#) [123 References](#) [10 Images](#)

### Overview

<b>Product name</b>	Alanine Transaminase Activity Assay Kit (Colorimetric/Fluorometric)
<b>Detection method</b>	Colorimetric/Fluorometric
<b>Sample type</b>	Urine, Serum, Plasma, Other biological fluids, Tissue Extracts, Cell Lysate, Cell culture media
<b>Assay type</b>	Enzyme activity (quantitative)
<b>Sensitivity</b>	> 10 mU/well
<b>Assay time</b>	1h 20m
<b>Species reactivity</b>	<b>Reacts with:</b> Mammals
<b>Product overview</b>	Alanine Transaminase Activity Assay Kit (Colorimetric/Fluorometric) ab105134 is a rapid and simple assay used to quantify alanine transaminase (ALT) activity in mammalian samples.

In the ALT assay protocol, ALT transfers an amino group from alanine to  $\alpha$ -ketoglutarate; producing pyruvate and glutamate. The pyruvate is detected in a reaction that converts a nearly colorless probe to a form that is colored (OD<sub>max</sub> = 570 nm) and fluorescent (Ex/Em = 535/587 nm).

The kit has a detection limit of 10 mU per well.

ALT assay protocol summary:

- add samples and standards to wells
- add reaction mix and incubate for 10 min at 37°C
- analyze every 2-3 min for 60 min with microplate reader in kinetic mode at 37°C

**Notes** This product is manufactured by BioVision, an Abcam company and was previously called K752 Alanine Aminotransferase (ALT or SGPT) Activity Colorimetric/Fluorometric Assay Kit. K752-100 is the same size as the 100 test size of ab105134.

Alanine transaminase is also called alanine aminotransferase or serum glutamic pyruvic transaminase (ALT, ALAT, SGPT).

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.

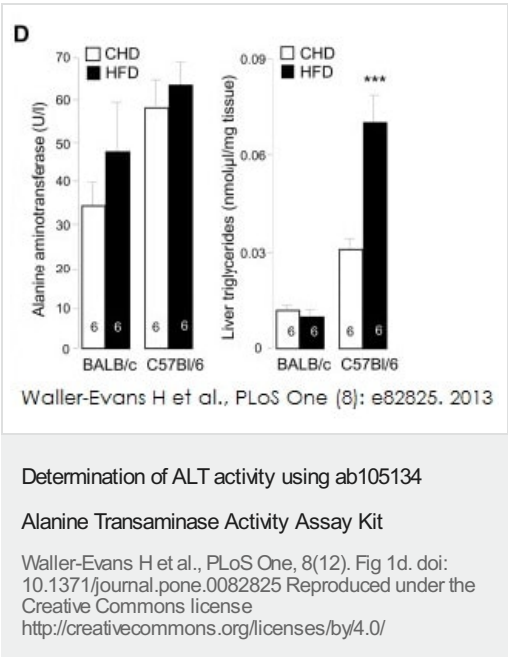
Properties

Storage instructions

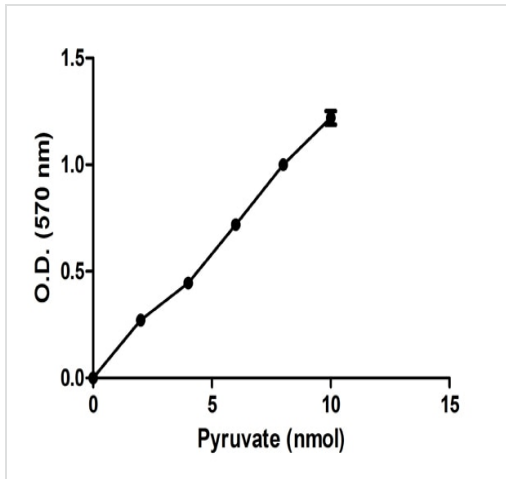
Store at -20°C. Please refer to protocols.

Components	100 tests	2000 tests
ALT Positive Control	1 vial	20 vials
ALT Substrate Mix	1 vial	20 vials
Assay Buffer XIII	1 x 25ml	20 x 25ml
Development Enzyme Mix I	1 vial	20 vials
OxiRed Probe	1 x 200µl	20 x 200µl
Pyruvate Standard	1 x 100µl	20 x 100µl

Images

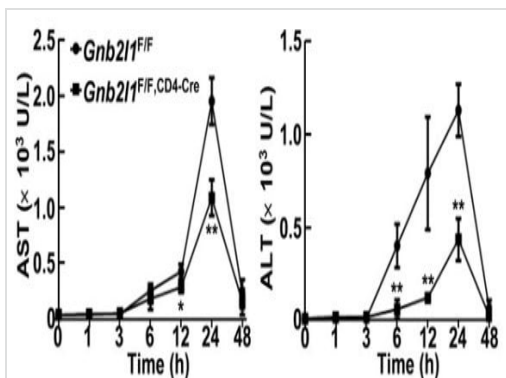


Liver samples from high fat diet (HFD) and standard carbohydrate diet (CHD) BALB/c and C57BL6/J mice were homogenised in an ALT assay buffer for the determination of ALT activity using ab105134. A separate batch of liver extracts was prepared and incubated in a buffer containing NP40 (5%) and supernatants containing the triglycerides were separated. Triglycerides concentration was determined on the supernatant fraction using [ab65336](#). ALT activity and triglycerides concentration were determined by measuring OD at 570nm.



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

Functional Studies - Alanine Transaminase Activity  
Assay Kit (ab105134)

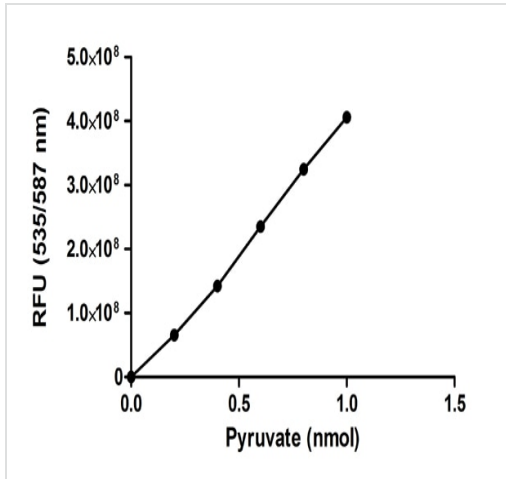


Serum aspartate transaminase (AST) levels were measured using [ab105135](#) and alanine transaminase (ALT) levels were measured using ab105134. Both levels were measured at various time periods post Con A injection. Mean values  $\pm$  SD are shown (n = 4).  $\square$  P < 0.05 and  $\square\square$  P < 0.01.

Qiu Guihua, et al.  
Frontiers in Immunology Vol 8. 2017 pg.575 (2017)

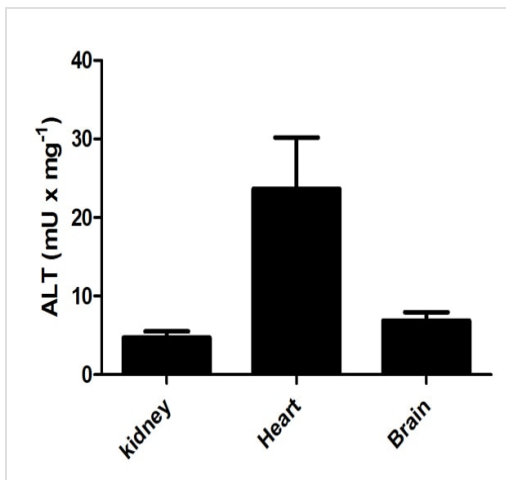
Functional Studies - Alanine Transaminase Activity  
Assay Kit (Colorimetric/Fluorometric) (ab105134)

Qiu Guihua, et al., Frontiers in Immunology Vol 8. 2017 pg.575, Fig 8, doi:10.3389/fimmu.2017.00575



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

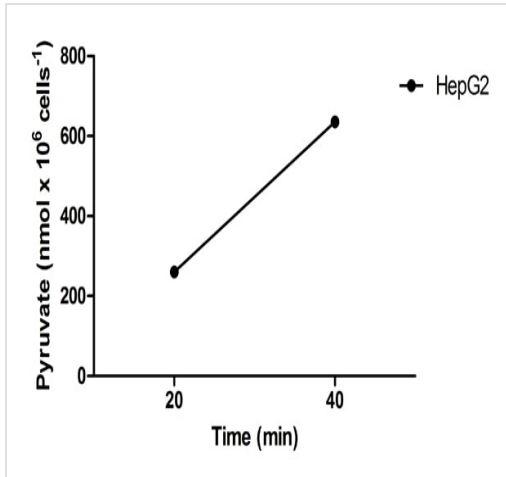
Functional Studies - Alanine Transaminase Activity  
Assay Kit (ab105134)



Alanine transaminase measured in mouse tissue lysates showing quantity (mU) per mg of tested sample.

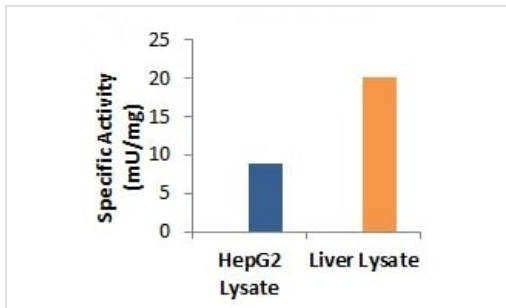
Protein concentration for samples varied from 4 mg/mL to 13 mg/mL. Samples were diluted 9-27 fold and measured colorimetrically.

Functional Studies - Alanine Transaminase Activity  
Assay Kit (ab105134)



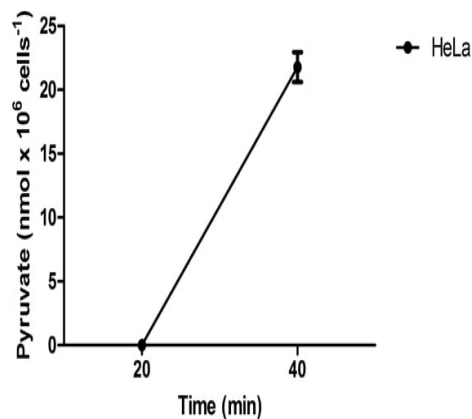
Pyruvate measured colorimetrically in cell lysate after 20 min and 40 min incubation time showing quantity (nmol) per 1 mln of tested cells.

Functional Studies - Alanine Transaminase Activity  
Assay Kit (ab105134)



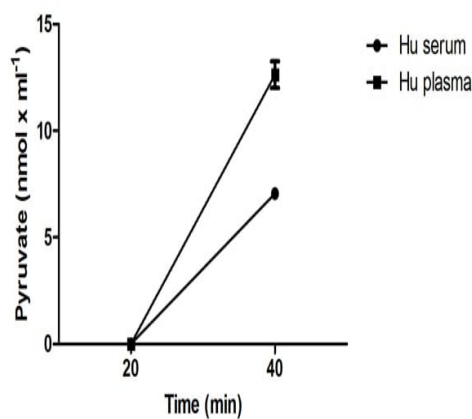
Measurement of alanine transaminase in HepG2 cells (10 µg) and liver lysate (15 µg).

Functional Assay - ab105134



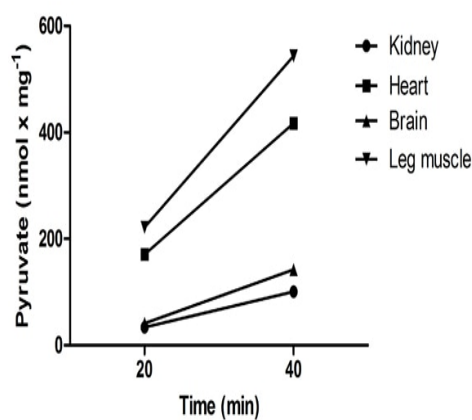
Pyruvate measured fluorometrically in cell lysate after 20 min and 40 min incubation time showing quantity (nmol) per 1 mln of tested cells.

Functional Studies - Alanine Transaminase Activity  
Assay Kit (105134)



Pyruvate measured in biological fluids after 20 min and 40 min incubation time showing quantity (nmol) per ml of tested sample.

Functional Studies - Alanine Transaminase Activity  
Assay Kit (ab105134)



Pyruvate measured in mouse tissue lysates after 20 min and 40 min incubation time showing quantity (nmol) per mg of tested sample.

Functional Studies - Alanine Transaminase Activity  
Assay Kit (ab105134)

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