

Product datasheet

Aspartate Aminotransferase Activity Assay Kit ab105135

★★★★★ [1 Abreviews](#) [64 References](#) [7 Images](#)

Overview

| | |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name | Aspartate Aminotransferase Activity Assay Kit |
| Detection method | Colorimetric |
| Sample type | Cell culture supernatant, Urine, Serum, Plasma, Other biological fluids, Tissue Extracts |
| Assay type | Enzyme activity |
| Sensitivity | 10 mU/well |
| Assay time | 1h 00m |
| Product overview | Aspartate Aminotransferase Activity Assay Kit (AST assay kit) ab105135 provides a rapid, simple, sensitive and reliable assay for AST activity. |

In the AST assay protocol, an amino group is transferred from aspartate to alpha-ketoglutarate. The products of this reversible transamination reaction are oxaloacetate and glutamate. The glutamate is detected in a reaction that converts a nearly colorless probe to color ($\lambda_{\text{max}} = 450 \text{ nm}$).

The AST assay has a detection limit of 10 mU per well.

AST assay protocol summary:

- add samples and standards to wells
- add reaction mix
- incubate at 37°C and analyze with microplate reader after 10 mins and then again after 60 mins

Chinese protocol available. See protocols section below.

Notes This product is manufactured by BioVision, an Abcam company and was previously called K753 Aspartate Aminotransferase (AST or SGOT) Activity Colorimetric Assay Kit. K753-100 is the same size as the 100 test size of ab105135.

Aspartate aminotransferase (AST), also known as Aspartate transaminase and Glutamate-oxaloacetate transaminase (GOT), is a transaminase (EC 2.6.1.1) similar to the more liver specific alanine transaminase (ALT). Although commonly included clinically as part of a diagnostic liver function test, AST has a broader clinical utility since it may also be elevated in diseases affecting other organs, such as the heart or muscles in myocardial infarction, also in acute pancreatitis, acute hemolytic anemia, severe burns, acute renal disease, musculoskeletal

diseases and trauma. It catalyzes the reaction: Aspartate + alpha-Ketoglutarate = Oxaloacetate + Glutamate Diagnostically, it is almost always measured in units/liter (U/L).

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.

| Components | 100 tests | 2000 tests |
|------------------------|-----------|------------|
| Assay Buffer XIX | 1 x 25ml | 20 x 25ml |
| AST Enzyme Mix | 1 vial | 20 vials |
| AST Positive Control | 1 vial | 20 vials |
| AST Substrate | 1 vial | 20 vials |
| Developer Solution III | 1 vial | 20 vials |
| Glutamate Standard | 1 x 0.1ml | 20 x 0.1ml |

Function

Plays a key role in amino acid metabolism.

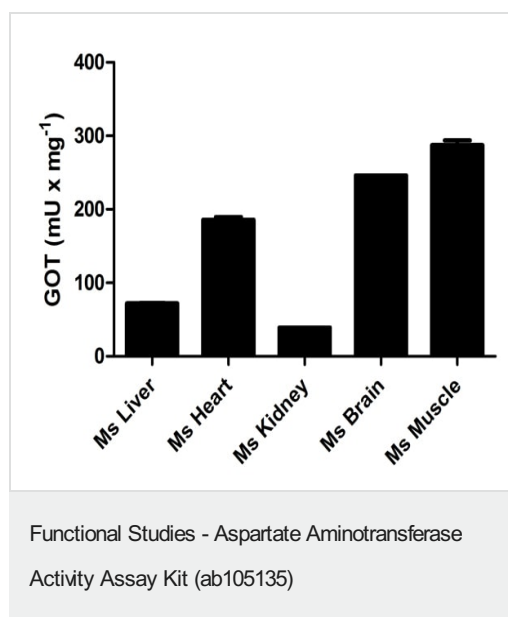
Sequence similarities

Belongs to the class-I pyridoxal-phosphate-dependent aminotransferase family.

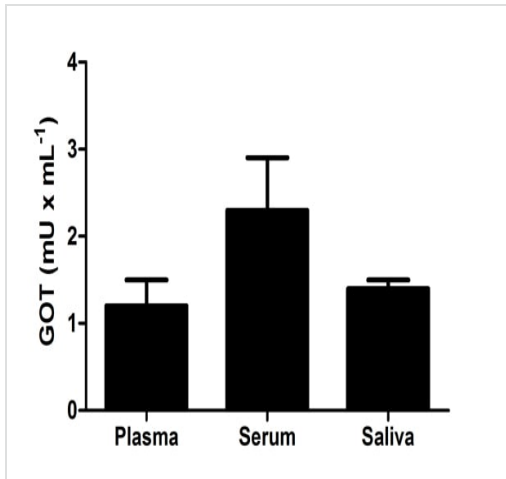
Cellular localization

Cytoplasm.

Images

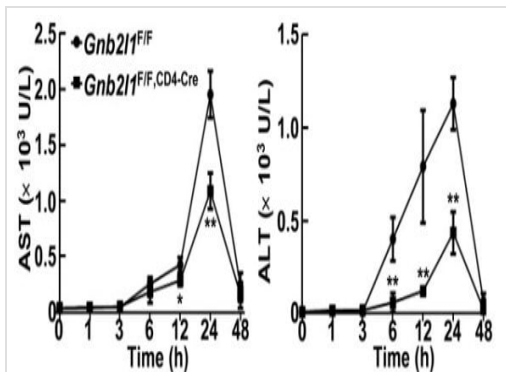


AST activity measured in mouse tissue lysates showing activity (mU) per mg of extracted protein (T1 = 2 min; T2 = 60 min).



AST activity measured in human biological fluids showing activity (mU) per mL of tested sample, (T1 = 2 min; T2 = 60 min) with background signals subtracted.

Functional Studies - Aspartate Aminotransferase
Activity Assay Kit (ab105135)

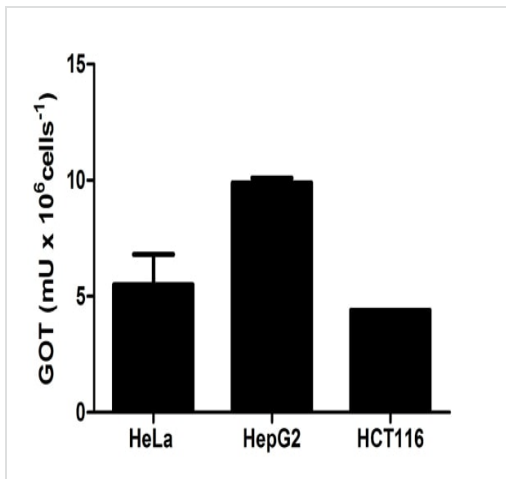


Serum aspartate transaminase (AST) levels were measured using ab105135 and alanine transaminase (ALT) levels were measured using [ab105134](#). Both levels were measured at various time periods post Con A injection. Mean values \pm SD are shown (n = 4).
 □ P < 0.05 and □ P < 0.01.

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

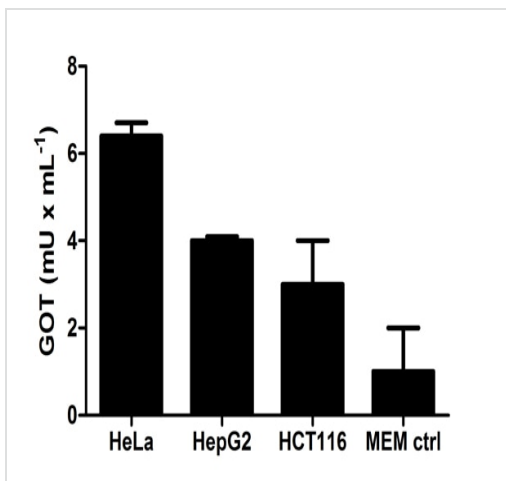
Functional Studies - Aspartate
Aminotransferase Activity Assay Kit (ab105135)

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



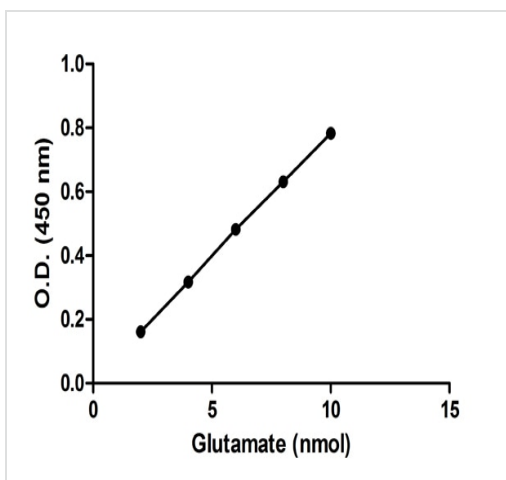
AST activity measured in cell lysates (T1 = 2 min; T2 = 60 min; duplicates (+/- SD), background signal subtracted).

Functional Studies - Aspartate Aminotransferase
Activity Assay Kit (ab105135)



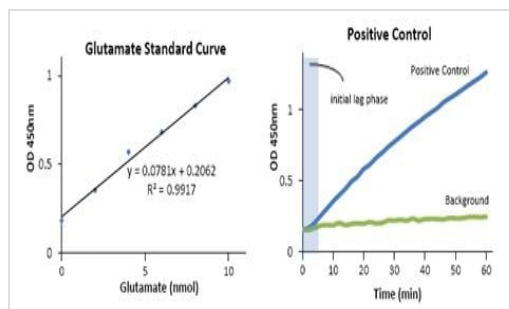
AST activity measured in cell culture medium and control medium, background signal subtracted. T1 = 2 min; T2 = 60 min.

Functional Studies - Aspartate Aminotransferase
Activity Assay Kit (ab105135)



Standard curve (60 minutes incubation): mean of duplicates (+/- SD) with background reads subtracted.

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Activity Assay Kit (ab105135)



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Example of Standard Curve and Positive control detection using ab105135.

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