abcam

ab202083

Anti-Alanine Transaminase antibody [EPR19616]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR19616
Purification technique	Affinity purification Protein A
Concentration	0.688 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat

Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/70
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information GPT

Function	Catalyzes the reversible transamination between alanine and 2-oxoglutarate to form pyruvate and glutamate. Participates in cellular nitrogen metabolism and also in liver gluconeogenesis starting with precursors transported from skeletal muscles (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Alanine transaminase also known as ALT or alanine aminotransferase is an important enzyme in the body. It has a molecular mass of approximately 54 kDa and catalyzes the conversion between alanine and pyruvate by transferring an amino group. ALT is mainly expressed in the liver but also present in other tissues

	like the heart and muscles. It is often measured as 'ALT activity' in clinical settings to ascertain liver health. In laboratories an 'ALT assay' or 'ALT kit' can determine alanine transaminase activity.
Biological function summary	Alanine transaminase plays a critical role in amino acid metabolism and energy production. It facilitates the transamination process which is significant for the balance of amino acids and carbohydrates. ALT as a standalone enzyme does not form part of a protein complex but works closely with alanine aminotransferase reactions. It helps maintain the cellular nitrogen balance linking nitrogen metabolism with energy pathways.
Pathways	The role of alanine transaminase is to interconnect carbohydrate and amino acid metabolism. It participates in the gluconeogenesis pathway and the citric acid cycle important for energy production. Through its activity in these pathways it interacts with proteins like aspartate aminotransferase (AST) affecting the balance of amino and keto acids in cells.
Associated diseases and disorders	Alanine transaminase levels indicate liver conditions such as hepatitis and liver cirrhosis. Elevated ALT activity suggests liver damage or inflammation. It also connects to conditions involving muscular injury. In these scenarios increased presence and activity of AST often accompany ALT providing a broader picture of the extent of tissue damage. Understanding the involvement of ALT in these pathways helps diagnose and monitor the progression of relevant health issues.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

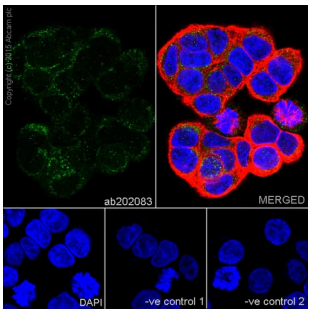
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

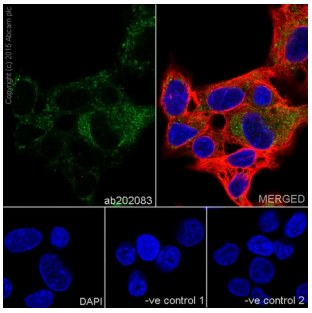
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-Alanine Transaminase antibody [EPR19616] (ab202083)

Alanine Transaminase Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Alanine Transaminase antibody

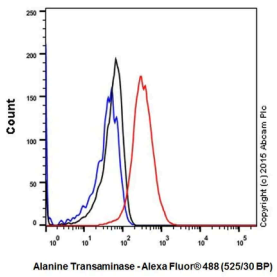
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HT-29 (Human colorectal adenocarcinoma cell line) cells labeling Alanine Transaminase with ab202083 at 1/100 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HT-29 cells. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody - Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (ab150120) at 1/1000 dilution (red).
The negative controls are as follows:
-ve control 1: ab202083 at 1/100 dilution followed by ab150120 at 1/1000 dilution.
-ve control 2: ab7291 at 1/1000 dilution followed by ab150077 at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Alanine Transaminase antibody [EPR19616] (ab202083)

Alanine Transaminase Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Alanine Transaminase antibody

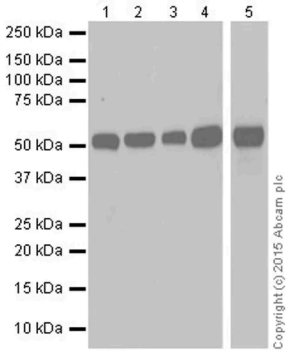
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HepG2 (Human liver hepatocellular carcinoma cell line) cells labeling Alanine Transaminase with ab202083 at 1/100 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HepG2 cells. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody - Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (ab150120) at 1/1000 dilution (red).
The negative controls are as follows:
-ve control 1: ab202083 at 1/100 dilution followed by ab150120 at 1/1000 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Alanine Transaminase antibody [EPR19616] (ab202083)

Alanine Transaminase Flow Cytometry (Intracellular) staining using rabbit Anti-Alanine Transaminase antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HepG2 (Human liver hepatocellular carcinoma cell line) cells labeling Alanine Transaminase with ab202083 at 1/70 dilution (red) compared with a Rabbit IgG,monoclonal- Isotype control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody (blue). Goat anti rabbit IgG (Alexa Fluorr® 488) at 1/500 dilution was used as the secondary antibody.



Western blot - Anti-Alanine Transaminase antibody [EPR19616] (ab202083)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1, 2, 3 and 4: 3 minutes; Lane 5: 4 seconds.

All lanes:
Western blot - Anti-Alanine Transaminase antibody [EPR19616] (ab202083) at 1/2000 dilution

Lane 1:
Human skeletal muscle lysate at 20 µg

Lane 2:
HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate at 20 µg

Lane 3:
Mouse muscle lysate at 20 µg

Lane 4:
Rat muscle lysate at 20 µg

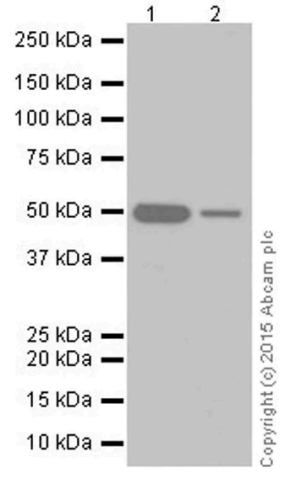
Lane 5:
Mouse liver lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 55 kDa, 60 kDa

Observed band size: 55 kDa, 60 kDa



Western blot - Anti-Alanine Transaminase antibody [EPR19616] (ab202083)

Blocking/Dilution buffer: 5% NFDM/TBST..
All lanes:
Western blot - Anti-Alanine Transaminase antibody [EPR19616] (ab202083) at 1/2000 dilution

Lane 1:
Human fetal liver lysate at 10 µg

Lane 2:
Human fetal kidney lysate at 10 µg

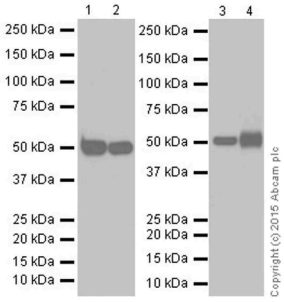
Secondary

All lanes:
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 55 kDa

Observed band size: 55 kDa

Exposure time: 3min



Western blot - Anti-Alanine Transaminase antibody [EPR19616] (ab202083)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1 and 2: 3 minutes; Lane 3 and 4: 30 seconds.

All lanes:
Western blot - Anti-Alanine Transaminase antibody [EPR19616] (ab202083) at 1/2000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse heart lysate at 10 µg

Lane 3:
Rat brain lysate at 10 µg

Lane 4:
Rat heart lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 55 kDa

Observed band size: 55 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.