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antibody and ELISA experts

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Anti-Alanine Transaminase/Gpt Antibody Picoband™

Catalog Number: A01638-1

About Gpt

This gene encodes cytosolic alanine aminotransaminase 1 (ALT1); also known as glutamate-pyruvate transaminase 1. This enzyme catalyzes the reversible transamination between alanine and 2-oxoglutarate to generate pyruvate and glutamate and, therefore, plays a key role in the intermediary metabolism of glucose and amino acids. Serum activity levels of this enzyme are routinely used as a biomarker of liver injury caused by drug toxicity, infection, alcohol, and steatosis. A related gene on chromosome 16 encodes a putative mitochondrial alanine aminotransaminase

Overview

Product Name	Anti-Alanine Transaminase/Gpt Antibody Picoband™
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-Alanine Transaminase/Gpt Antibody Picoband™ catalog # A01638-1. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Mouse, Rat.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	Q8QZR5

Technical Details

Immunogen	E.coli-derived mouse Alanine Transaminase/Gpt recombinant protein (Position: A2-S496).
Predicted Reactive Species	Human
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.

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Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.25 ug/ml, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Mouse Flow Cytometry, 1-3 ug/1x10^6 cells, Mouse Direct ELISA, 0.1-0.5 ug/ml, Mouse

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Anti-Alanine Transaminase/Gpt Antibody Picoband™ (A01638-1) Images

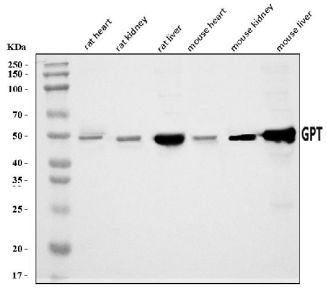

Figure 1. Western blot analysis of Alanine Transaminase/Gpt using anti-Alanine Transaminase/Gpt antibody (A01638-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: rat heart tissue lysates,
Lane 2: rat kidney tissue lysates,
Lane 3: rat liver tissue lysates,
Lane 4: mouse heart tissue lysates,
Lane 5: mouse kidney tissue lysates,
Lane 6: mouse liver tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Alanine Transaminase/Gpt antigen affinity purified polyclonal antibody (Catalog # A01638-1) at 0.25 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Alanine Transaminase/Gpt at approximately 55 kDa. The expected band size for Alanine Transaminase/Gpt is at 55 kDa.

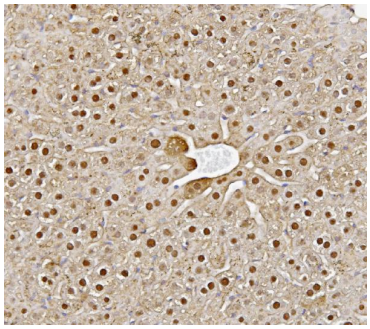

Figure 2. IHC analysis of Alanine Transaminase/Gpt using anti-Alanine Transaminase/Gpt antibody (A01638-1). Alanine Transaminase/Gpt was detected in a paraffin-embedded section of mouse liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Alanine Transaminase/Gpt Antibody (A01638-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

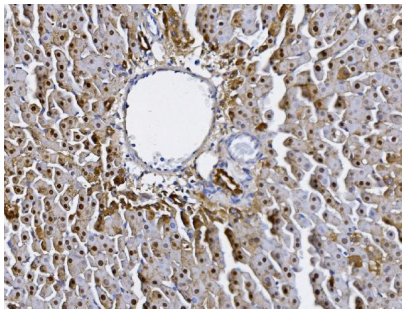

Figure 3. IHC analysis of Alanine Transaminase/Gpt using anti-Alanine Transaminase/Gpt antibody (A01638-1). Alanine Transaminase/Gpt was detected in a paraffin-embedded section of rat liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Alanine Transaminase/Gpt Antibody (A01638-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using

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Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

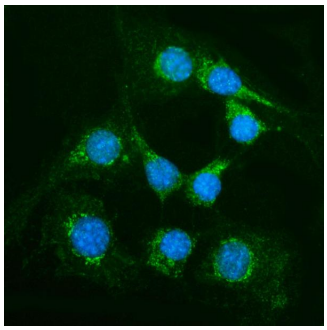

Figure 4. IF analysis of Alanine Transaminase/Gpt using anti-Alanine Transaminase/Gpt antibody (A01638-1). Alanine Transaminase/Gpt was detected in an immunocytochemical section of NIH/3T3 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Alanine Transaminase/Gpt Antibody (A01638-1) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

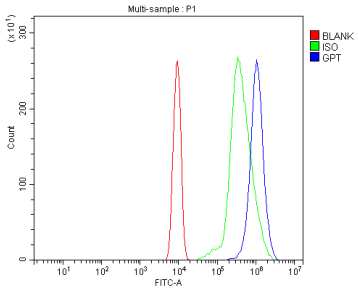

Figure 5. Flow Cytometry analysis of ANA-1 cells using anti-Alanine Transaminase/Gpt antibody (A01638-1). Overlay histogram showing ANA-1 cells stained with A01638-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Alanine Transaminase/Gpt Antibody (A01638-1, 1 ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.