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Anti-Aspartate Aminotransferase/GOT1 Antibody Picoband™ (monoclonal, 6B3B4)

Catalog # ABO16626

Specification

Anti-Aspartate Aminotransferase/GOT1 Antibody Picoband™ (monoclonal, 6B3B4) - Product Information

Application	**WB, IHC, FC**
Primary Accession	P17174
Host	**Mouse**
Isotype	**IgG2b**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-Aspartate Aminotransferase/GOT1 Antibody Picoband™ (monoclonal, 6B3B4) . Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution
Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-Aspartate Aminotransferase/GOT1 Antibody Picoband™ (monoclonal, 6B3B4) - Additional Information

Gene ID 2805

Other Names
Aspartate aminotransferase, cytoplasmic, cAspAT, 2.6.1.1, 2.6.1.3, Cysteine aminotransferase, cytoplasmic, Cysteine transaminase, cytoplasmic, cCAT, Glutamate oxaloacetate transaminase 1, Transaminase A, GOT1 (HGNC:4432)

Calculated MW
43 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat
 Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

Immunogen
E.coli-derived human Aspartate Aminotransferase/GOT1 recombinant protein (Position: S5-Q413).

Purification
Immunogen affinity purified.

Storage	**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.

Anti-Aspartate Aminotransferase/GOT1 Antibody Picoband™ (monoclonal, 6B3B4) - Protein Information

Name GOT1 (HGNC:4432)

Function
Biosynthesis of L-glutamate from L-aspartate or L-cysteine (PubMed:21900944). Important regulator of levels of glutamate, the major excitatory neurotransmitter of the vertebrate central nervous system. Acts as a scavenger of glutamate in brain neuroprotection. The aspartate aminotransferase activity is involved in hepatic glucose synthesis during development and in adipocyte glyceroneogenesis. Using L-cysteine as substrate, regulates levels of mercaptopyruvate, an important source of hydrogen sulfide. Mercaptopyruvate is converted into H(2)S via the action of 3-mercaptopyruvate sulfurtransferase (3MST). Hydrogen sulfide is an important synaptic modulator and neuroprotectant in the brain. In addition, catalyzes (2S)-2- aminobutanoate, a by-product in the cysteine biosynthesis pathway (PubMed:27827456).

Cellular Location
Cytoplasm.

Anti-Aspartate Aminotransferase/GOT1 Antibody Picoband™ (monoclonal, 6B3B4) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Aspartate Aminotransferase/GOT1 Antibody Picoband™ (monoclonal, 6B3B4) - Images

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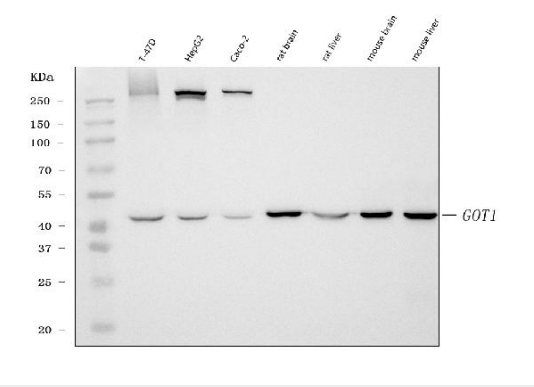

Figure 1. Western blot analysis of Aspartate Aminotransferase/GOT1 using anti-Aspartate Aminotransferase/GOT1 antibody (M04085-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human T-47D whole cell lysates,
Lane 2: human HepG2 whole cell lysates,
Lane 3: human Caco-2 whole cell lysates,
Lane 4: rat brain tissue lysates,
Lane 5: rat liver tissue lysates,
Lane 6: mouse brain tissue lysates,
Lane 7: 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 mouse anti-Aspartate Aminotransferase/GOT1 antigen affinity purified monoclonal antibody (Catalog # M04085-1) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for Aspartate Aminotransferase/GOT1 at approximately 43 kDa. The expected band size for Aspartate Aminotransferase/GOT1 is at 46 kDa.

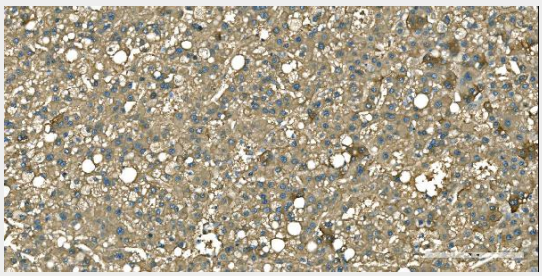

Figure 2. IHC analysis of Aspartate Aminotransferase/GOT1 using anti-Aspartate Aminotransferase/GOT1 antibody (M04085-1).
Aspartate Aminotransferase/GOT1 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aspartate Aminotransferase/GOT1 Antibody (M04085-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

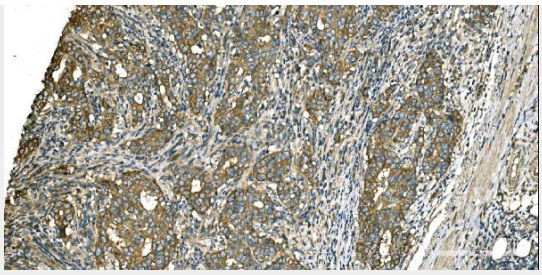

Figure 3. IHC analysis of Aspartate Aminotransferase/GOT1 using anti-Aspartate Aminotransferase/GOT1 antibody (M04085-1).
Aspartate Aminotransferase/GOT1 was detected in a paraffin-embedded section of human renal pelvis squamous tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aspartate Aminotransferase/GOT1 Antibody (M04085-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

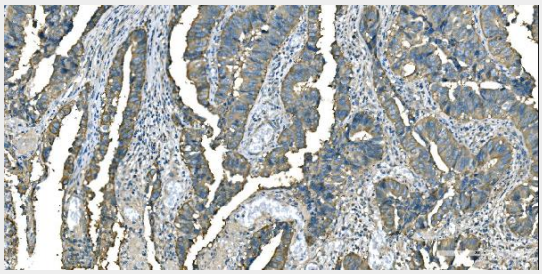

Figure 4. IHC analysis of Aspartate Aminotransferase/GOT1 using anti-Aspartate Aminotransferase/GOT1 antibody (M04085-1).
Aspartate Aminotransferase/GOT1 was detected in a paraffin-embedded section of human rectum adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aspartate Aminotransferase/GOT1 Antibody (M04085-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

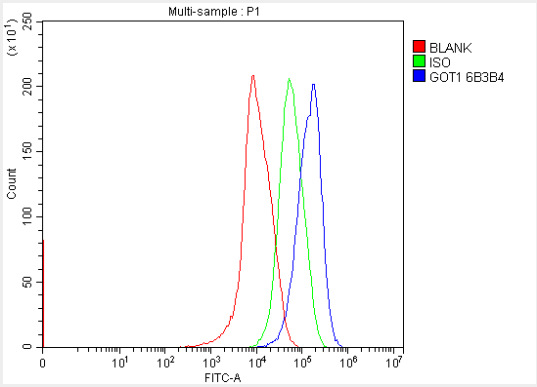

Figure 5. Flow Cytometry analysis of HepG2 cells using anti-Aspartate Aminotransferase/GOT1 antibody (M04085-1).
Overlay histogram showing HepG2 cells stained with M04085-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Aspartate Aminotransferase/GOT1 Antibody (M04085-1, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody

for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-Aspartate Aminotransferase/GOT1 Antibody Picoband™ (monoclonal, 6B3B4) - Background

Aspartate aminotransferase, cytoplasmic is an enzyme that in humans is encoded by the GOT1 gene. Glutamic-oxaloacetic transaminase is a pyridoxal phosphate-dependent enzyme which exists in cytoplasmic and mitochondrial forms, GOT1 and GOT2, respectively. GOT plays a role in amino acid metabolism and the urea and tricarboxylic acid cycles. The two enzymes are homodimeric and show close homology.