abcam

ab232471

Anti-Aspartate Aminotransferase + FABP-1 antibody [EPR12145] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR12145
Purification technique	Affinity purification Protein A
Concentration	0.989 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human, Recombinant full length protein - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat, Recombinant fragment - Human, Recombinant full length protein - Human
Dilution info	-
Notes	-

WB

Tested

Species	Rat, Mouse, Recombinant fragment - Human, Recombinant full length protein - Human
Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human, Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information GOT2

Function Catalyzes the irreversible transamination of the L-tryptophan metabolite L-kynurenine to form kynurenic acid (KA). As a member of the malate-aspartate shuttle, it has a key role in the intracellular NAD(H) redox balance. Is important for metabolite exchange between mitochondria and cytosol, and for amino acid metabolism. Facilitates cellular uptake of long-chain free fatty acids.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab232471 is the carrier-free version of ab170950.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	Aspartate Aminotransferase also known as AST or alkaline aminotransferase is an important enzyme in amino acid metabolism. It catalyzes the transfer of an amino group from aspartate to alpha-ketoglutarate forming glutamate and oxaloacetate. This enzyme has an approximate molecular mass of 46 kDa and is expressed in the liver heart skeletal muscle and kidney tissues. AST plays a significant role in the

	intracellular balance of amino acids and is an important biomarker in clinical diagnostics.
Biological function summary	AST functions in the transamination process a mechanism central to the synthesis and degradation of amino acids. This process is fundamental in the production of energy and the maintenance of the urea cycle. AST does not form a part of a complex but interacts dynamically with substrates and cofactors like pyridoxal phosphate essential for its enzymatic activity. The activity of AST is important in ensuring the proper function of amino acid metabolism in various tissues.
Pathways	AST operates within the citric acid cycle and the urea cycle. In the citric acid cycle AST contributes to the interconversion of amino acids and metabolic intermediates aiding in energy production. It links to proteins such as malate dehydrogenase and glutamate dehydrogenase which play roles in associated metabolic conversions and energy cycles. These interactions reflect AST's integration in maintaining cellular metabolic processes.
Associated diseases and disorders	AST levels serve as an indicator of liver health and are often elevated in conditions such as hepatitis and myocardial infarction. Hepatitis causes liver damage resulting in increased AST release into the bloodstream. In myocardial infarction damaged cardiac tissue releases AST providing a diagnostic cue for tissue injury. Elevated AST levels can associate with other enzymes like alanine aminotransferase (ALT) used together to assess liver and heart function.

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

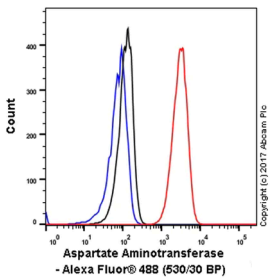
We do not recommend this combination. It is not covered by our product promise.

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.

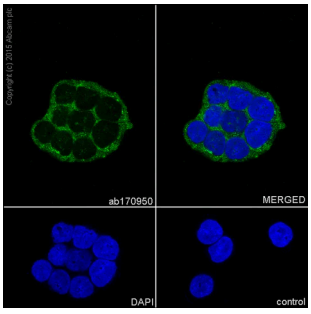
7 product images



Flow Cytometry (Intracellular) - Anti-Aspartate Aminotransferase + FABP-1 antibody [EPR12145] - BSA and Azide free (ab232471)

Aspartate Aminotransferase + FABP-1 Flow Cytometry (Intracellular) staining using rabbit Anti-Aspartate Aminotransferase + FABP-1 antibody

Intracellular Flow Cytometry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) cells labeling Aspartate Aminotransferase + FABP-1 with purified ab170950 at 1/20 dilution (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170950).

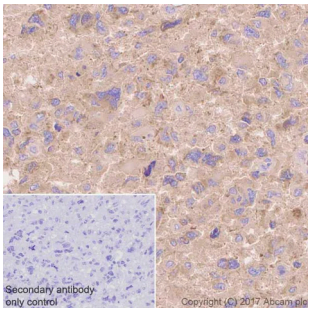


Immunocytochemistry/ Immunofluorescence - Anti-Aspartate Aminotransferase + FABP-1 antibody [EPR12145] - BSA and Azide free (ab232471)

Aspartate Aminotransferase + FABP-1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Aspartate Aminotransferase + FABP-1 antibody

Immunocytochemistry/Immunofluorescence analysis of HT-29 (human colorectal adenocarcinoma) cells labelling Aspartate Aminotransferase + FABP-1 with purified ab170950 at 1/120. Cells were fixed with 100% methanol. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (ab150077) at 1/1000 dilution was used as the secondary antibody. Nuclei counterstained with DAPI (blue).
Secondary Only Control: PBS was used instead of the primary antibody as the negative control.

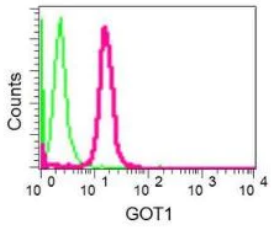
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170950).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aspartate Aminotransferase + FABP-1 antibody [EPR12145] - BSA and Azide free (ab232471)

Aspartate Aminotransferase + FABP-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Aspartate Aminotransferase + FABP-1 antibody

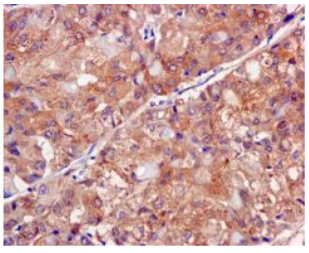
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human glioma tissue sections labeling Aspartate Aminotransferase + FABP-1 with Purified ab170950 at 1:170 dilution. Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170950).



Flow Cytometry (Intracellular) - Anti-Aspartate Aminotransferase + FABP-1 antibody [EPR12145] - BSA and Azide free (ab232471)

Aspartate Aminotransferase + FABP-1 Flow Cytometry (Intracellular) staining using rabbit Anti-Aspartate Aminotransferase + FABP-1 antibody

Intracellular flow cytometric analysis of permeabilized K562 cells labeling Aspartate Aminotransferase + FABP-1 using unpurified ab170950 at 1/10 dilution (red) or a rabbit IgG negative (green).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170950).

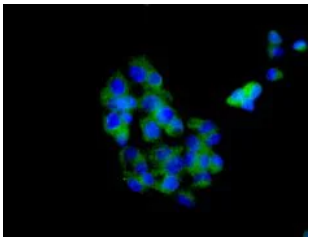


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aspartate Aminotransferase + FABP-1 antibody [EPR12145] - BSA and Azide free (ab232471)

Aspartate Aminotransferase + FABP-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Aspartate Aminotransferase + FABP-1 antibody

Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling Aspartate Aminotransferase + FABP-1 using unpurified ab170950 at 1/50 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170950).

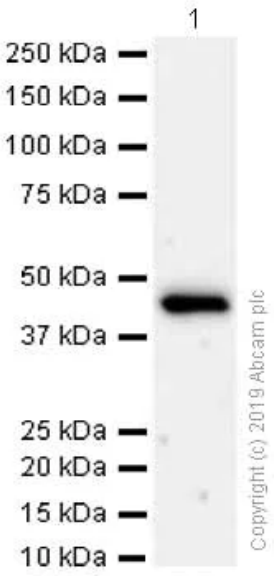
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Aspartate Aminotransferase + FABP-1 antibody [EPR12145] - BSA and Azide free (ab232471)

Aspartate Aminotransferase + FABP-1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Aspartate Aminotransferase + FABP-1 antibody

Immunofluorescent analysis of HepG2 cells labeling Aspartate Aminotransferase + FABP-1 using unpurified ab170950 at 1/50 dilution (green). DAPI nuclear staining (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170950).



Western blot - Anti-Aspartate Aminotransferase + FABP-1 antibody [EPR12145] - BSA and Azide free (ab232471)

Aspartate Aminotransferase + FABP-1 Western blot staining using rabbit Anti-Aspartate Aminotransferase + FABP-1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170950).
All lanes:
Western blot - Anti-Aspartate Aminotransferase + FABP-1 antibody [EPR12145] (ab170950) at 1/1000 dilution

All lanes:
Western blot - Recombinant human FABP-1 protein (His tag N-Terminus) (ab206788) at 0.015 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 47 kDa

Exposure time: 180s

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