abcam

ab307833

Anti-BCAT2 antibody [EPR27488-72]

Recombinant | RabMAb | 20ul selling size

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	EPR27488-72
Purification technique	Affinity purification Protein A
Concentration	0.55 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Transfected cell lysate - Human

Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Species	Mouse
Dilution info	1/500
Notes	-

Expected

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

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Species	Mouse
Dilution info	1/30
Notes	-

Expected

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

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Expected

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

Not recommended

Species	Human, Transfected cell lysate - Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat, Transfected cell lysate - Human
Dilution info	-
Notes	-

Target data

See full target information BCAT2

Function	Catalyzes the first reaction in the catabolism of the essential branched chain amino acids leucine, isoleucine, and valine (PubMed:17050531, PubMed:25653144, PubMed:8702755). Branched chain amino acid catabolism plays a role in adipocyte differentiation by providing lipogenic acetyl-CoA pools in differentiated adipocytes (By similarity). Mechanistically, acetyl-CoA derived from branched chain amino acid catabolism is used by EP300/p300 to acetylate and inhibit PRDM16, thereby preventing adipose tissue browning (By similarity). May also function as a transporter of branched chain alpha-keto acids (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.

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

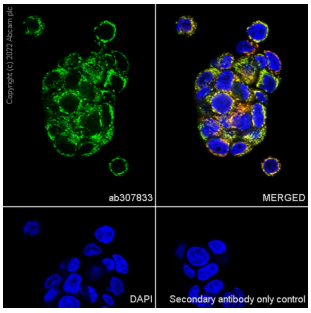
We do not recommend this combination. It is not covered by our product promise.

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.

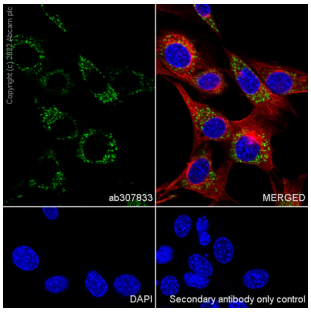
Full details and terms and conditions can be found here:
Terms & Conditions.

9 product images



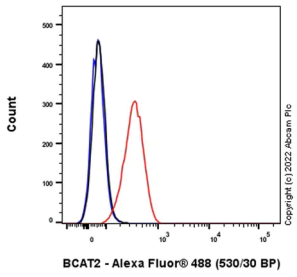
Immunocytochemistry/ Immunofluorescence - Anti-BCAT2 antibody [EPR27488-72] (ab307833)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MCF7 (human breast adenocarcinoma epithelial cell) cells labelling BCAT2 with ab307833 at 1/500 dilution (1.1 ug/ml) followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (2 ug/ml) (Green). Confocal image showing mitochondrial staining in MCF7 cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab197491 Anti-COX IV Mouse monoclonal antibody (Alexa Fluor® 647) - Mitochondrial Marker was used to counterstain tubulin at 1/200 dilution (2.5 ug/ml)(Red). The nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (2 ug/ml).



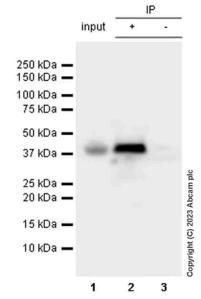
Immunocytochemistry/ Immunofluorescence - Anti-BCAT2 antibody [EPR27488-72] (ab307833)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling BCAT2 with ab307833 at 1/500 dilution (1.1 ug/ml) followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (2 ug/ml) (Green). Confocal image showing cytoplasmic staining in NIH/3T3 cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (2.5 ug/ml) (Red). The nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (2 ug/ml).



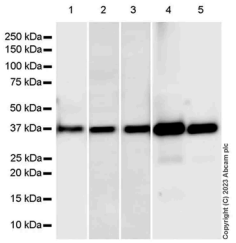
Flow Cytometry (Intracellular) - Anti-BCAT2 antibody [EPR27488-72] (ab307833)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 mouse embryonic fibroblast cells labelling BCAT2 with ab307833 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-BCAT2 antibody [EPR27488-72] (ab307833)

BCAT2 was immunoprecipitated from 0.35 mg NIH/3T3 (mouse embryonic fibroblast) whole cell lysate with ab307833 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab307833 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution. Lane 1: NIH/3T3 whole cell lysate 10 ug Lane 2: ab307833 IP in NIH/3T3 whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab307833 in NIH/3T3 whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 3 seconds.



Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. Exposure time: Lane 1, 4-5: 15 seconds, Lane 2-3: 81 seconds.
All lanes:
Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833) at 1/1000 dilution

Lane 1:
Human skeletal muscle tissue lysate at 20 µg

Lane 2:
Human liver tissue lysate at 20 µg

Lane 3:
Mouse liver tissue lysate at 20 µg

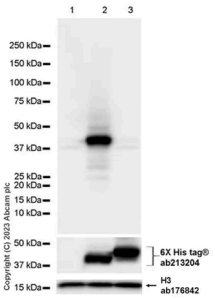
Lane 4:
Mouse heart tissue lysate at 20 µg

Lane 5:
Mouse skeletal muscle tissue lysate at 20 µg

Secondary

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

Observed band size: 37 kDa



Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. This antibody does not cross-react with human BCAT1. In Western blot, anti-His antibody (ab213204) staining at 1/5000 dilution. In Western blot, anti-H3 antibody (ab176842) loading control staining at 1/100000 dilution. Exposure time: 1 second.
All lanes:
Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833) at 1/1000 dilution

Lane 1:
293T (human embryonic kidney epithelial cell)cells transfected with an empty vector containing a his tag whole cell lysate at 20 µg

Lane 2:
293T cells transfected with a human BCAT2 expression vector containing a his tag whole cell lysate at 20 µg

Lane 3:
293T cells transfected with a human BCAT1 expression vector containing a his tag whole cell lysate at 20 µg

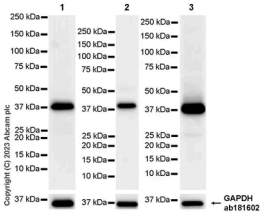
Secondary

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

Predicted band size: 44 kDa

Observed band size: 37 kDa

Exposure time: 1s



Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: 15 seconds.
All lanes:
Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833) at 1/1000 dilution

Lane 1:
Mouse stomach tissue lysate at 20 µg

Lane 2:
Human stomach tissue lysate at 20 µg

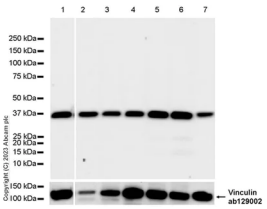
Lane 3:
Rat stomach tissue lysate at 20 µg

Secondary

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

Observed band size: 37 kDa

Exposure time: 15s



Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833)

BCAT2 Western blot staining using rabbit Anti-BCAT2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST. In Western blot, anti- Vinculin antibody (ab129002) loading control staining at 1/10000 dilution. Exposure time: 15 seconds.
All lanes:
Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833) at 1/1000 dilution

Lane 1:
MCF7 whole cell lysate at 20 µg

Lane 2:
Jurkat whole cell lysate at 20 µg

Lane 3:
Raji whole cell lysate at 20 µg

Lane 4:
HeLa whole cell lysate at 20 µg

Lane 5:
NIH/3T3 whole cell lysate at 20 µg

Lane 6:
RAW264.7 whole cell lysate at 20 µg

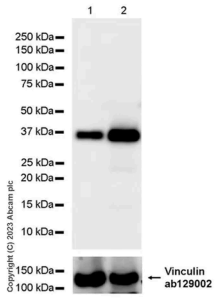
Lane 7:
PC-12 whole cell lysate at 20 µg

Secondary

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

Observed band size: 37 kDa

Exposure time: 15s



Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833)

BCAT2 Western blot staining using rabbit Anti-BCAT2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST. The expression of BCAT2 is upregulated in response to 3T3-L1 differentiation for 7 days treatment (PMID:27689828). In Western blot, anti- Vinculin antibody (ab129002) loading control staining at 1/10000 dilution. Exposure time: 6 seconds.
All lanes:
Western blot - Anti-BCAT2 antibody [EPR27488-72] (ab307833) at 1/1000 dilution

Lane 1:
Untreated 3T3-L1 whole cell lysate at 20 µg

Lane 2:
3T3-L1 differentiation for 7 days whole cell lysate at 20 µg

Secondary

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

Observed band size: 37 kDa

Exposure time: 6s

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