abcam

ab309514

Anti-BCAT2 antibody [EPR27488-91]

Recombinant | RabMAb | Advanced Validation | 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	EPR27488-91
Purification technique	Affinity purification Protein A
Concentration	0.499 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Transfected cell lysate - Human
Dilution info	1/1000
Notes	-

Species	Human

Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

mIHC

Tested

Species	Human
Dilution info	1/5000
Notes	-

Not recommended

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

IHC-P

Tested

Species	Human
Dilution info	1/5000
Notes	-

Not recommended

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

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Not recommended

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

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

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Mouse, Transfected cell lysate - Human, Rat
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

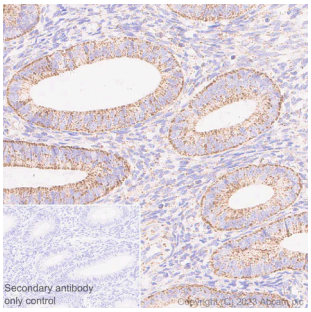
We do not recommend this combination. It is not covered by our product promise.

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.

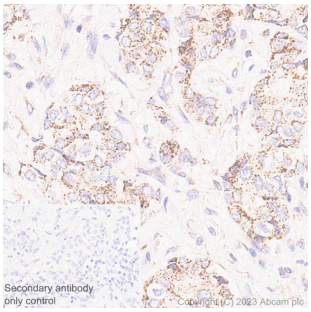
Full details and terms and conditions can be found here:
Terms & Conditions.

11 product images



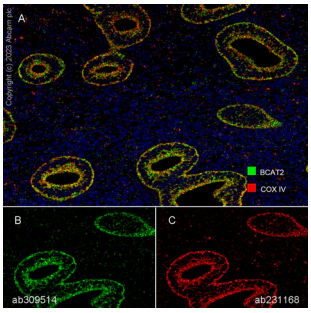
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

Immunohistochemical analysis of paraffin-embedded Human endometrium tissue labeling BCAT2 with ab309514 at 1/5000 (0.1 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on human endometrium. The section was incubated with ab309514 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument.Incubate slides with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

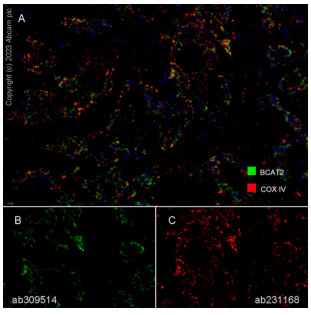
Immunohistochemical analysis of paraffin-embedded Human breast carcino tissue labeling BCAT2 with ab309514 at 1/5000 (0.1 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on human breast carcinoma. The section was incubated with ab309514 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument.Incubate slides with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



Multiplex immunohistochemistry - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

BCAT2 Multiplex immunohistochemistry staining of Human endometrium using rabbit Anti-BCAT2 antibody

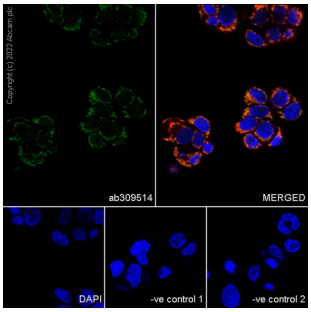
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded Human endometrium tissue labeling BCAT2 with ab309514 at 1/5000 Panel A: merged staining of anti-BCAT2 (green; Opal™520) and anti-COX IV (red; Opal™570) on human endometrium. Panel B: anti-BCAT2 stained on mitochondria. Panel C: anti-COX IV stained on mitochondria. The section was incubated in two rounds of staining: in the order of ab309514 and ab231168 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope. Counterstained with DAPI. Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



Multiplex immunohistochemistry - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

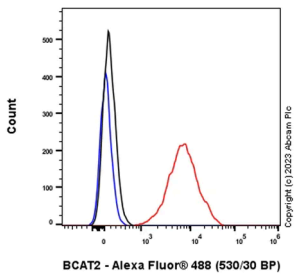
BCAT2 Multiplex immunohistochemistry staining of Human breast carcinoma using rabbit Anti-BCAT2 antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded Human breast carcinoma tissue labeling BCAT2 with ab309514 at 1/5000 Panel A: merged staining of anti-BCAT2 (green; Opal™520) and anti-COX IV (red; Opal™570) on human breast carcinoma. Panel B: anti-BCAT2 stained on mitochondria. Panel C: anti-COX IV stained on mitochondria. The section was incubated in two rounds of staining: in the order of ab309514 and ab231168 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope. Counterstained with DAPI. Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



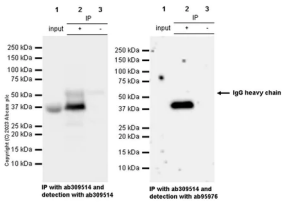
Immunocytochemistry/ Immunofluorescence - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

Immunofluorescent analysis of 100% methanol-fixed, 0.1% TritonX-100 permeabilized MCF7 (human breast adenocarcinoma epithelial cell) cells labelling BCAT2 with ab309514 at 1/100 (4.99 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal showing mitochondrial staining in MCF7 cell line.Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). is observed. anti-COX IV mouse monoclonal antibody - Mitochondrial Marker was used to counterstain tubulin at 1/50 0.5 ug/ml dilution (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 2 ug/ml dilution.



Flow Cytometry (Intracellular) - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized MCF7 (human breast adenocarcinoma epithelial cell) cells labelling BCAT2 with ab309514 at 1/500 dilution (0.1 ug)/Red (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.



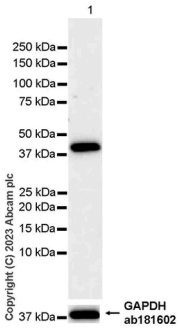
Immunoprecipitation - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

BCAT2 was immunoprecipitated from 0.35 mg MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate with ab309514 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab309514 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate Lane 2: ab309514 IP in MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate Lane 3:Rabbit monoclonal IgG (ab172730) instead of ab309514 in MCF7 whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: Lanes 1-3 (the left image): 1 second, lanes 1-3 (the right image): 180 seconds. The IP experiment was performed by ab309514 using MCF7 cells. On the left the IP blot was probed with ab309514 and on the right the blot was probed by another anti-BCAT2 antibody (ab95976)(1:1000 dilution).
All lanes:
Immunoprecipitation - Anti-BCAT2 antibody [EPR27488-91] (ab309514) at 1/30 dilution

All lanes:
MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution



Western blot - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

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: 180 seconds
All lanes:
Western blot - Anti-BCAT2 antibody [EPR27488-91] (ab309514) at 1/1000 dilution

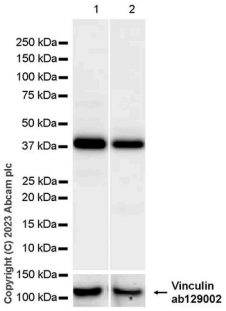
All lanes:
Human breast cancer tissue lysate at 20 µg

Secondary

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

Observed band size: 37 kDa

Exposure time: 180s



Western blot - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

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: 6 seconds
All lanes:
Western blot - Anti-BCAT2 antibody [EPR27488-91] (ab309514) at 1/1000 dilution

Lane 1:
Human skeletal muscle tissue lysate at 20 µg

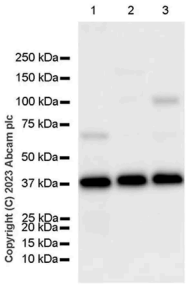
Lane 2:
Human liver tissue lysate at 20 µg

Secondary

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

Observed band size: 37 kDa

Exposure time: 6s



Western blot - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Exposure time: 6 seconds
All lanes:
Western blot - Anti-BCAT2 antibody [EPR27488-91] (ab309514) at 1/1000 dilution

Lane 1:
Jurkat (human T cell leukemia T lymphocyte) whole cell lysate at 20 µg

Lane 2:
Raji (human Burkitts lymphoma B lymphocyte)whole cell lysate at 20 µg

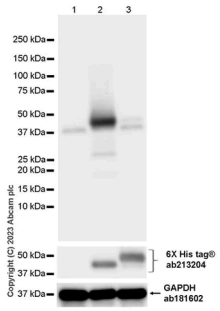
Lane 3:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Observed band size: 37 kDa

Exposure time: 6s



Western blot - Anti-BCAT2 antibody [EPR27488-91] (ab309514)

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. Anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: 1 second
All lanes:
Western blot - Anti-BCAT2 antibody [EPR27488-91] (ab309514) at 1/1000 dilution

Lane 1:
293T cells transfected with an empty vector containi a His-tag whole cell lysate 5 at 5 µg

Lane 2:
293T cells transfected with a human BCAT2 expression vector containi a His-tag whole cell lysate 5 at 5 µg

Lane 3:
293T cells transfected with a human BCAT1 expression vector containi a His-tag whole cell lysate 5 at 5 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: 1s

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