abcam

ab250835

Anti-ABCE1 antibody [EPR15373(B)] - 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	EPR15373(B)
Purification technique	Affinity purification Protein A
Concentration	1.04 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	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

Not recommended

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information ABCE1

Function

Nucleoside-triphosphatase (NTPase) involved in ribosome recycling by mediating ribosome disassembly (PubMed:20122402, PubMed:21448132). Able to hydrolyze ATP, GTP, UTP and CTP (PubMed:20122402). Splits ribosomes into free 60S subunits and tRNA- and mRNA-bound 40S subunits (PubMed:20122402, PubMed:21448132). Acts either after canonical termination facilitated by release factors (ETF1/eRF1) or after recognition of stalled and vacant ribosomes by mRNA surveillance factors (PELO/Pelota) (PubMed:20122402, PubMed:21448132). Involved in the No-Go Decay (NGD) pathway: recruited to stalled ribosomes by the Pelota-HBS1L complex, and drives the disassembly of stalled ribosomes, followed by degradation of damaged mRNAs as part of the NGD pathway (PubMed:21448132). Also plays a role in quality control of translation of mitochondrial outer membrane-localized mRNA (PubMed:29861391). As part of the PINK1-regulated signaling, ubiquitinated by CNOT4 upon mitochondria damage; this modification generates polyubiquitin signals that recruit autophagy receptors to the mitochondrial outer membrane and initiate mitophagy (PubMed:29861391). RNASEL-specific protein inhibitor which antagonizes the binding of 2-5A (5'-phosphorylated 2',5'-linked oligoadenylates) to RNASEL (PubMed:9660177). Negative regulator of the anti-viral effect of the interferon-regulated 2-5A/RNASEL pathway (PubMed:11585831,

PubMed:9660177, PubMed:9847332). (Microbial infection) May act as a chaperone for post-translational events during HIV-1 capsid assembly. (Microbial infection) Plays a role in the down-regulation of the 2-5A/RNASEL pathway during encephalomyocarditis virus (EMCV) and HIV-1 infections.

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

ab250835 is the carrier-free version of ab185548.

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	ABCE1 also known as ATP-binding cassette sub-family E member 1 is an ATPase involved in various cellular processes. It belongs to the ATP-binding cassette (ABC) transporter family. The protein mass is approximately 68 kDa and its expression occurs widely in various tissues including the cytoplasm and mitochondria. ABCE1 has a unique structure with two nucleotide-binding domains making it distinct from other ABC family members that typically transport molecules across membranes.
Biological function summary	ABCE1 plays a role in inhibiting ribonuclease activity and is essential in ribosome recycling. This protein interacts with translation initiation factors and actively participates in the dissociation of ribosomes after translation termination. It is a part of the ribosome recycling complex an important multi-proteins setup necessary to prepare ribosomes for another round of translation. The biochemical interactions and presence in different cellular compartments highlight its multiple roles in cellular homeostasis.
Pathways	ABCE1 engages significantly in translation and its regulation. It plays an important role in the translation termination pathway where it interacts with eukaryotic release factors. Additionally it influences the degradation pathway of defective ribosomal products. Within these pathways the function of ABCE1 is closely linked to proteins like eRF1 and eRF3 which are essential in the translation termination process. The interaction of these proteins ensures efficient termination and recycling of translation machinery components.
Associated diseases and disorders	Alterations in ABCE1 expression or function link to certain cancers and viral infections. The aberrant activity of ABCE1 influences cancer progression as it affects protein synthesis and cellular growth levels. Also ABCE1 has been implicated in promoting the replication of certain viruses providing them a competitive advantage. Proteins like eIF3 and eIF4 involved in translation initiation can show altered associations in disorders where ABCE1 is dysregulated influencing disease outcomes and progression.

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

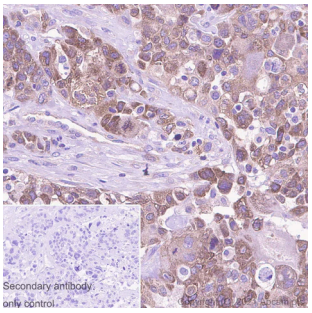
We do not recommend this combination. It is not covered by our product promise.

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.

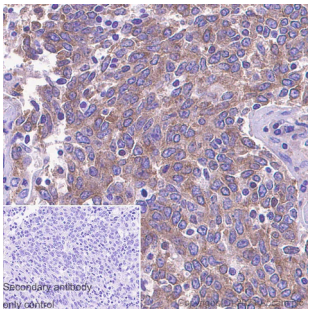
8 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ABCE1 antibody [EPR15373(B)] - BSA and Azide free (ab250835)

ABCE1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ABCE1 antibody

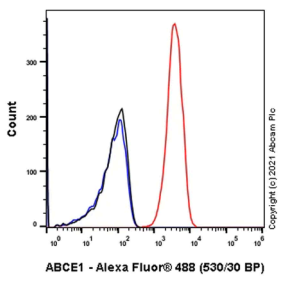
This data was developed using ab185548, the same antibody clone in a different buffer formulation.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast carcinoma tissue sections labeling ABCE1 with Purified ab185548 at 1:100 (11 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ABCE1 antibody [EPR15373(B)] - BSA and Azide free (ab250835)

ABCE1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ABCE1 antibody

This data was developed using ab185548, the same antibody clone in a different buffer formulation.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human lung carcinoma tissue sections labeling ABCE1 with Purified ab185548 at 1:100 (11 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.

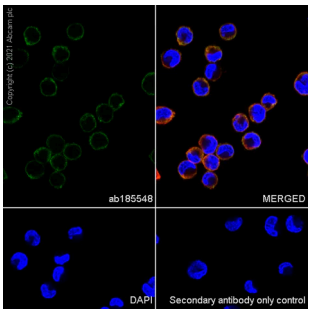


Flow Cytometry (Intracellular) - Anti-ABCE1 antibody [EPR15373(B)] - BSA and Azide free (ab250835)

ABCE1 Flow Cytometry (Intracellular) staining using rabbit Anti-ABCE1 antibody

This data was developed using ab250835, the same antibody clone in a different buffer formulation.
Flow Cytometry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) cells labelling ABCE1 with Purified ab250835 at 1:100 dilution (10 µg/ml) (Red). Cells were fixed with 4%

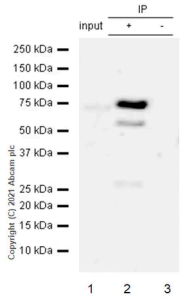
Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-ABCE1 antibody [EPR15373(B)] - BSA and Azide free (ab250835)

ABCE1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ABCE1 antibody

This data was developed using ab250835, the same antibody clone in a different buffer formulation.
Immunocytochemistry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) cells labeling ABCE1 with Purified ab250835 at 1:100 dilution (10 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A]+H21:L21 - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunoprecipitation - Anti-ABCE1 antibody [EPR15373(B)] - BSA and Azide free (ab250835)

Purified ab250835 at 1:60 dilution (2µg) immunoprecipitating ABCE1 in HEK-293 whole cell lysate. Blocking and diluting buffer and concentration: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-ABCE1 antibody [EPR15373(B)] - BSA and Azide free (ab250835) at 1/60 dilution

Lane 1:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate at 10 µg

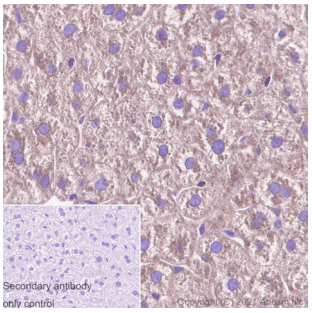
Lane 2:
ab250835 + HEK-293 whole cell lysate

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab185548 in HEK-293 whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

Predicted band size: 67 kDa

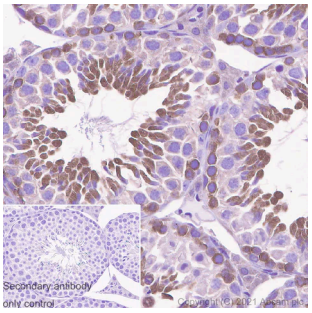


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ABCE1 antibody [EPR15373(B)] - BSA and Azide free (ab250835)

ABCE1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ABCE1 antibody

This data was developed using ab185548, the same antibody clone in a different buffer formulation.

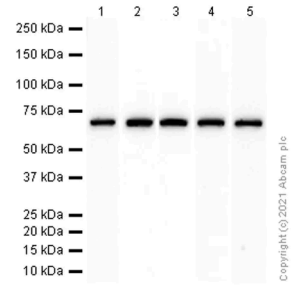
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue sections labeling ABCE1 with Purified ab185548 at 1:300 (3.67 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ABCE1 antibody [EPR15373(B)] - BSA and Azide free (ab250835)

ABCE1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ABCE1 antibody

This data was developed using ab185548, the same antibody clone in a different buffer formulation.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse testis tissue sections labeling ABCE1 with Purified ab185548 at 1:300 (3.67 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.



Western blot - Anti-ABCE1 antibody [EPR15373(B)] - BSA and Azide free (ab250835)

All lanes:
Western blot - Anti-ABCE1 antibody [EPR15373(B)] - C-terminal (ab185548) at 1/5000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 2:
K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate

Lane 3:
Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate

Lane 4:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate

Lane 5:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate

Secondary

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

Predicted band size: 67 kDa

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