abcam

ab289670

Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric)

Anti-TOMM20 antibody [EPR15581-39] - Rat IgG2a (Chimeric) (ab289670) is a rat monoclonal antibody detecting TOMM20 in **Western Blot, Flow Cytometry (Intra), IHC-P, IHC-Fr, ICC/IF**. Suitable for **Human, Mouse, Rat**.

This antibody is the chimeric Rat version of clone EPR15581-39, available in rabbit as ab186734 with over 100 publications. Same clone, same staining pattern, different species antibody backbone.
Learn more about chimeric antibodies

Lab Essentials | Recombinant | 20ul selling size

Key facts

Isotype	IgG2a
Host species	Rat
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	EPR15581-39
Purification technique	Ion exchange chromatography
Specificity	This antibody does not react with mouse and rat species in IHC.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Expected

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

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	This antibody does not react with mouse and rat species in IHC. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	This antibody does not react with mouse and rat species in IHC. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	This antibody does not react with mouse and rat species in IHC. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

IHC-Fr

Tested

Species	Mouse
Dilution info	1/50
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)

Species	Rat
Dilution info	1/50
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/1000

Notes	-

Expected

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

Target data

See full target information TOMM20

Function	Central receptor component of the translocase of the outer membrane of mitochondria (TOM) complex essential for the recognition and translocation of cytosolically synthesized mitochondrial preproteins (PubMed:40080546). Together with TOMM22 functions as the transit peptide receptor at the surface of the mitochondrion outer membrane and facilitates the movement of preproteins into the TOM40 translocation pore (PubMed:18331822). The TOM complex associates with the ion channel VDAC2 and PINK1 kinase at depolarized mitochondria, this interaction stabilizes PINK1 at the outer mitochondrial membrane and triggers downstream mitophagy by the recruitment of the E3 ubiquitin ligase PRKN (PubMed:40080546). Required for the translocation across the mitochondrial outer membrane of cytochrome P450 monooxygenases (By similarity).

Storage

Shipped at conditions	Blue Ice
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

What is this antibody validated in?
Anti-TOMM20 antibody [EPR15581-39] - Rat IgG2a (Chimeric) (ab289670) is a rat recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunohistochemistry (IHC-Fr), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of TOMM20?
Anti-TOMM20 [EPR15581-39] - Rat IgG2a (Chimeric) (ab289670) specifically detects a band for TOMM20 (UniProt: Q15388) at a molecular weight of 16kDa.

Other related products
We have a range of other formats of antibody clone [EPR15581-39] also available for your convenience: ab186734, Alexa Fluor® 488 - ab205486, Alexa Fluor® 647 - ab205487, HRP - ab205796, Alexa Fluor® 555 - ab214409, Carrier free - ab220822, ab283317, Carrier free - ab283339, ab289670, Carrier free - ab289676, Alexa Fluor® 488 - ab309083, Alexa Fluor® 647 - ab309166, Alexa Fluor® 647 - ab309167

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size 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

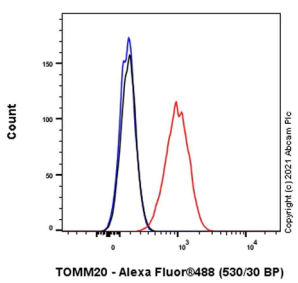
We do not recommend this combination. It is not covered by our product promise.

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.

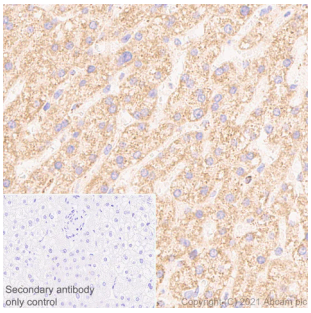
7 product images



Flow Cytometry (Intracellular) - Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric) (ab289670)

TOMM20 Flow Cytometry (Intracellular) staining using rat Anti-TOMM20 antibody

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (human cervix adenocarcinoma epithelial cell line) cells labeling TOMM20 with ab289670 at 1/1000 dilution (Red) compared with a rat monoclonal IgG isotype control (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).
Goat F(ab)2 Anti-Rat IgG Fc (Alexa Fluor® 488, ab150161) at 1/2000 dilution was used as the secondary antibody.

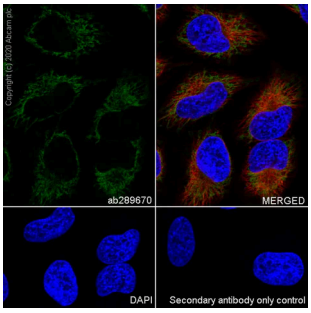


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric) (ab289670)

TOMM20 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rat Anti-TOMM20 antibody

Immunohistochemical analysis of paraffin-embedded Human liver tissue labelling TOMM20 with ab289670 at 1/500 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on human liver. The section was incubated with ab289670 for 30 mins at room temperature and followed by rabbit specific IgG antibody (ab102248) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

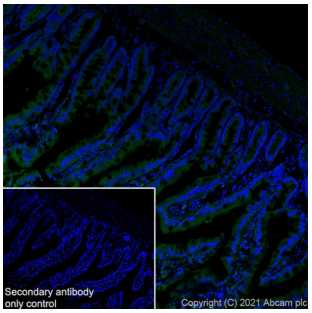


Immunocytochemistry/ Immunofluorescence - Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric) (ab289670)

TOMM20 Immunocytochemistry/ Immunofluorescence staining using rat Anti-TOMM20 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa cells labeling TOMM20 with ab289670 at 1/100 dilution, followed by Goat Anti-Rat IgG H&L (Alexa Fluor® 488 (ab150157) secondary antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in HeLa cell line. The nuclear counterstain is DAPI (Blue). Tubuln is labeled

using ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) at 1/200 dilution (Red).
Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rat IgG H&L (Alexa Fluor® 488 (ab150157) secondary antibody at 1/1000 dilution.

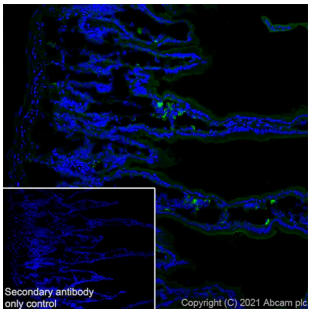


Immunohistochemistry (Frozen sections) - Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric) (ab289670)

TOMM20 Immunohistochemistry (Frozen sections) staining using rat Anti-TOMM20 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen rat small intestine tissue labelling TOMM20 with ab289670 at 1/50 dilution, followed by ab150157 Goat Anti-Rat IgG H&L (Alexa Fluor® 488) secondary antibody at 1/1000 dilution (Green). Positive staining on rat small intestine. The nuclear conterstain is DAPI (Blue).
Secondary antibody only control: Used PBS instead of primary antibody, followed by ab150157 Goat Anti-Rat IgG H&L (Alexa Fluor® 488) secondary antibody at 1/1000 dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

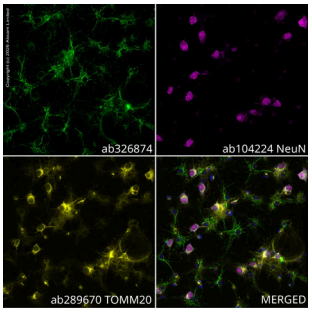


Immunohistochemistry (Frozen sections) - Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric) (ab289670)

TOMM20 Immunohistochemistry (Frozen sections) staining using rat Anti-TOMM20 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse small intestine tissue labelling TOMM20 with ab289670 at 1/50 dilution, followed by ab150157 Goat Anti-Rat IgG H&L (Alexa Fluor® 488) secondary antibody at 1/1000 dilution (Green). Positive staining on mouse small intestine. The nuclear conterstain is DAPI (Blue).
Secondary antibody only control: Used PBS instead of primary antibody, followed by ab150157 Goat Anti-Rat IgG H&L (Alexa Fluor® 488) secondary antibody at 1/1000 dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).



Immunocytochemistry/ Immunofluorescence - Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric) (ab289670)

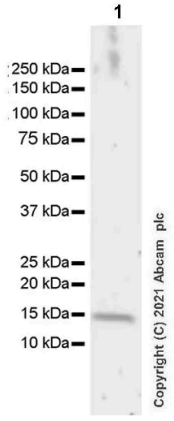
TOMM20 Immunocytochemistry/ Immunofluorescence staining of Rat Primary Hippocampal Neurons DIV14 using rat Anti-TOMM20 antibody

Immunofluorescent analysis of 100% methanol-fixed, 0.1% TritonX-100 permeabilized Rat Primary Hippocampal Neurons DIV14 cells labelling ALDH2 with ab326874 at 1 ug/mL dilution (Green).

ab326874 staining ALDH2 in primary rat neurons/glia, DIV14 (prepared from E18 rat hippocampal brain area, obtained from Transnetyx Tissue by BrainBits, LLC, cat.no. SDHEP) cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal rabbit serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab326874 at 1µg/ml (shown in green), ab289670 -

Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric) (shown in pseudocolour magenta) and ab104224 - Ms Anti-NeuN antibody [1B7] - Neuronal Marker (shown in pseudocolour yellow). Cells were then incubated with ab150081, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution, ab150167 - Goat Anti-Rat IgG H&L (Alexa Fluor® 647) preadsorbed at 1/1000 dilution and ab150120, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution. Nuclear DNA was labelled with DAPI (shown in blue). Also suitable in cells fixed with 4% paraformaldehyde (10 min).Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

was used to counterstain tubulin at 1/ dilution (Magenta). The Nuclear counterstain was DAPI (Blue).



Western blot - Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric) (ab289670)

TOMM20 Western blot staining of HeLa (human cervix adenocarcinoma epithelial cell line) whole cell lysate using rat Anti-TOMM20 antibody

Blocking and dilution buffer: 5% NFDM/TBST.
Exposure time: 3 minutes.

All lanes:
Western blot - Anti-TOMM20 antibody [EPR15581-39] - Mitochondrial Marker - Rat IgG2a (Chimeric) (ab289670) at 1/1000 dilution

All lanes:
HeLa (human cervix adenocarcinoma epithelial cell line) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rat IgG H&L (HRP) (ab205720) at 1/5000 dilution

Predicted band size: 16 kDa

Observed band size: 16 kDa

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