abcam

ab200664

Anti-Tmem27 antibody [EPR17748]

Recombinant | RabMAb

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	EPR17748
Purification technique	Affinity purification Protein A
Concentration	0.568 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat

Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

IHC-P

Tested

Species	Rat
Dilution info	1/10000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/10000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

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

Target data

See full target information CLTRN

Function	Plays an important role in amino acid transport by acting as binding partner of amino acid transporters SLC6A18 and SLC6A19, regulating their trafficking on the cell surface and their amino acid transporter activity (By similarity). May also play a role in trafficking of amino acid transporters SLC3A1 and SLC7A9 to the renal cortical cell membrane (By similarity). Regulator of SNARE complex function (PubMed:16330323). Stimulator of beta cell replication (PubMed:16330323).

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.

Supplementary info

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

Activity summary	Tmem27 also known as collectrin is a type I transmembrane protein with a mass of approximately 46 kDa. It is predominantly expressed in the kidney and pancreas where it localizes mostly at the apical membranes of epithelial cells in renal proximal tubules and pancreatic ducts. Tmem27 engages in processes associated with cell surface expression influencing the behavior of nearby ion channels and transporters.
Biological function summary	The involvement of Tmem27 extends to the regulation of amino acid transport and insulin exocytosis. It associates with the γ-aminobutyric acid type B receptor (GABBR) complex contributing to the modulation of nutrient uptake. Tmem27 influences the processing and trafficking of small neutral amino acids enhancing their absorption across epithelial barriers which is important for maintaining cellular homeostasis and metabolic activities.
Pathways	The function of Tmem27 is significant in the renin-angiotensin system and the insulin signaling pathway. In the renin-angiotensin system Tmem27 operates alongside the angiotensin-converting enzyme (ACE) to precisely regulate blood pressure homeostasis. It also acts within the insulin signaling pathway by modulating insulin secretion potentially working closely with glucose transporter type 4 (GLUT4) to ensure efficient glucose uptake by cells.
Associated diseases and disorders	Tmem27 has connections to conditions such as diabetes mellitus and kidney disease. Its involvement in insulin secretion links it to diabetes impacting glucose homeostasis when irregularities occur. Tmem27's interactions with angiotensin-converting enzyme can affect blood pressure regulation creating implications for hypertension-related kidney disorders. Understanding these associations

highlights the potential of Tmem27 as a therapeutic target in managing these diseases.

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

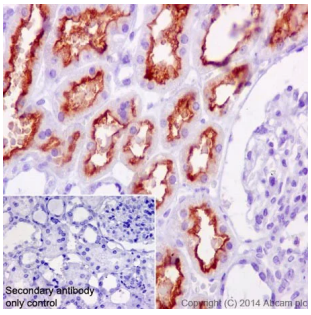
We do not recommend this combination. It is not covered by our product promise.

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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tmem27 antibody [EPR17748] (ab200664)

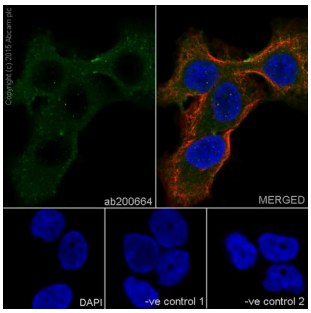
Tmem27 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Tmem27 antibody

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling Tmem27 with ab200664 at 1/10000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Luminal surface and cytoplasm staining on Human kidney tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

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



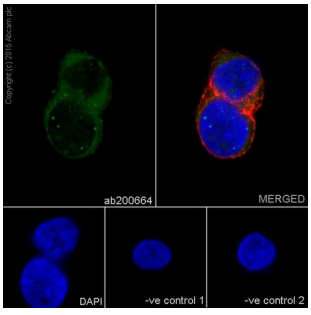
Immunocytochemistry/ Immunofluorescence - Anti-Tmem27 antibody [EPR17748] (ab200664)

Tmem27 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Tmem27 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized BxPC-3 (Human pancreas adenocarcinoma cells) cells labeling Tmem27 with ab200664 at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green).
Cytoplasm staining on BxPC-3 cell line is observed.

The nuclear counter stain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows:
-ve control 1: ab200664 at 1/500 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Tmem27 antibody [EPR17748] (ab200664)

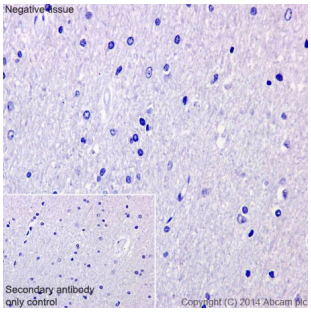
Tmem27 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Tmem27 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK293 (Human embryonic kidney) cells labeling Tmem27 with ab200664 at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green).
Cytoplasm staining on HEK293 cell line is observed.

The nuclear counter stain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).

The negative controls are as follows:
-ve control 1: ab200664 at 1/500 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tmem27 antibody [EPR17748] (ab200664)

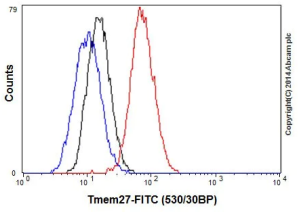
Tmem27 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Tmem27 antibody

Immunohistochemical analysis of paraffin-embedded Human cerebral cortex tissue labeling Tmem27 with ab200664 at 1/10000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
No staining on Human cerebral cortex tissue is observed (Negative control for Tmem27).

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

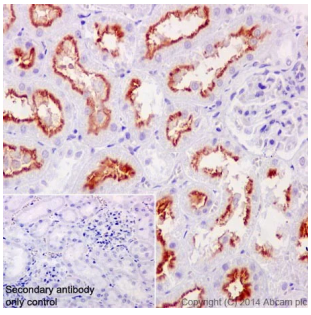
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Tmem27 antibody [EPR17748] (ab200664)

Tmem27 Flow Cytometry (Intracellular) staining using rabbit Anti-Tmem27 antibody

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed BxPC-3 (Human pancreas adenocarcinoma cells) cells labeling Tmem27 with ab200664 at 1/100 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730;black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tmem27 antibody [EPR17748] (ab200664)

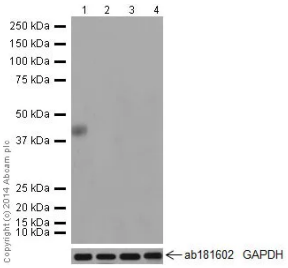
Tmem27 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Tmem27 antibody

Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling Tmem27 with ab200664 at 1/10000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Luminal surface and cytoplasm staining on rat kidney tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

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



Western blot - Anti-Tmem27 antibody [EPR17748] (ab200664)

Tmem27 Western blot staining using rabbit Anti-Tmem27 antibody

The observed MW is consistent with what has been described in the literature PMID:16330323. Please note lanes 2-4 are negative controls for Tmem27.

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Tmem27 antibody [EPR17748] (ab200664) at 1/1000 dilution

Lane 1:
Human pancreas lysate at 10 µg

Lane 2:
Human fetal brain lysate at 10 µg

Lane 3:
Human fetal heart lysate at 10 µg

Lane 4:
Human fetal spleen lysate at 10 µg

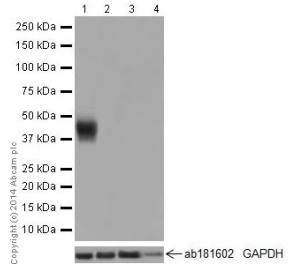
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 25 kDa

Observed band size: 38 kDa

Exposure time: 3min



Western blot - Anti-Tmem27 antibody [EPR17748] (ab200664)

The observed MW is consistent with what has been described in the literature PMID:16330323. Please note lanes 2-4 are negative controls for Tmem27.

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Tmem27 antibody [EPR17748] (ab200664) at 1/1000 dilution

Lane 1:
Human fetal kidney lysate at 10 µg

Lane 2:
Human fetal brain lysate at 10 µg

Lane 3:
Human fetal heart lysate at 10 µg

Lane 4:
Human fetal spleen lysate at 10 µg

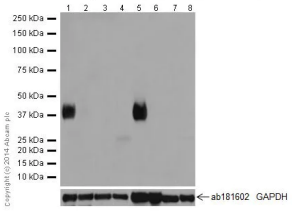
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 19 kDa, 25 kDa

Observed band size: 17 kDa, 38 kDa

Exposure time: 5s



Western blot - Anti-Tmem27 antibody [EPR17748] (ab200664)

The observed MW is consistent with what has been described in the literature PMID:16330323.
Please note lanes 2-4 and 6-8 are negative controls for Tmem27.

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Tmem27 antibody [EPR17748] (ab200664) at 1/1000 dilution

Lane 1:
Mouse kidney lysate at 10 µg

Lane 2:
Mouse brain lysate at 10 µg

Lane 3:
Mouse heart lysate at 10 µg

Lane 4:
Mouse spleen lysate at 10 µg

Lane 5:
Rat kidney lysate at 10 µg

Lane 6:
Rat brain lysate at 10 µg

Lane 7:
Rat heart lysate at 10 µg

Lane 8:
Rat spleen lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 25 kDa

Observed band size: 38 kDa

Exposure time: 5s

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