abcam

Product datasheet

Anti-ACE2 antibody [EPR24705-45] ab272500

KO VALIDATED Recombinant RabMAb

★★★★★ 2 Abreviews 2 References 11 Images

Overview

Product name	Anti-ACE2 antibody [EPR24705-45]
Description	Rabbit monoclonal [EPR24705-45] to ACE2
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt, IP, WB, IHC-P, ICC/IF **Unsuitable for:** IHC-Fr
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human kidney and testis tissue lysates; Calu-3 whole cell lysate. IHC-P: Human kidney and testis tissues. ICC/IF: Calu-3, HEK-293T cells transfected with myc-ACE-2; WT CaCo2. Flow cyt: Calu-3 cells. IP: Human testis tissue lysate.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59.94% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR24705-45

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab272500 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt	★★★★★ (1)	1/500.
IP		1/30.
WB	★★★★★ (1)	1/1000. Detects a band of approximately 120 kDa (predicted molecular weight: 92 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF		1/50.

Application notes Is unsuitable for IHC-Fr.

Target

Function Carboxypeptidase which converts angiotensin I to angiotensin 1-9, a peptide of unknown function, and angiotensin II to angiotensin 1-7, a vasodilator. Also able to hydrolyze apelin-13 and dynorphin-13 with high efficiency. May be an important regulator of heart function. In case of human coronaviruses SARS and HCoV-NL63 infections, serve as functional receptor for the spike glycoprotein of both coronaviruses.

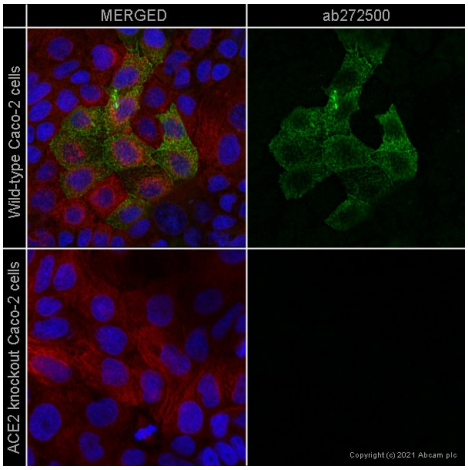
Tissue specificity Expressed in endothelial cells from small and large arteries, and in arterial smooth muscle cells. Expressed in lung alveolar epithelial cells, enterocytes of the small intestine, Leydig cells and Sertoli cells (at protein level). Expressed in heart, kidney, testis, and gastrointestinal system.

Sequence similarities Belongs to the peptidase M2 family.

Post-translational modifications N-glycosylation on Asn-90 may limit SARS infectivity.

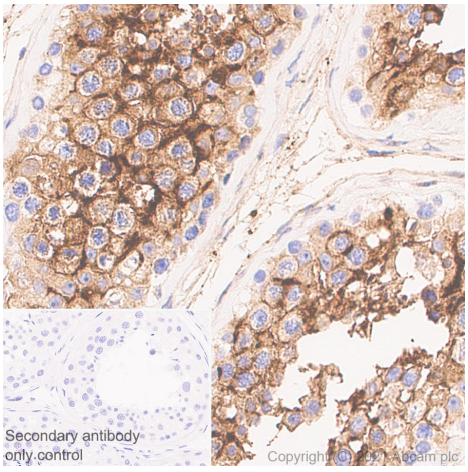
Cellular localization Secreted and Cell membrane.

Images



Immunocytochemistry/ Immunofluorescence - Anti-ACE2 antibody [EPR24705-45] (ab272500)

ab272500 staining ACE2 in wild-type Caco2 cells (top panel) and ACE2 knockout Caco2 cells (**ab273731**) (bottom panel). The cells were fixed with 4% paraformaldehyde (10 min) then permeabilized with 0.1% Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab272500 at 10µg/ml concentration and **ab7291** (Mouse monoclonal to alpha Tubulin) at 1/1000 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (**ab150081**) at 2 µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) (**ab150120**) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).

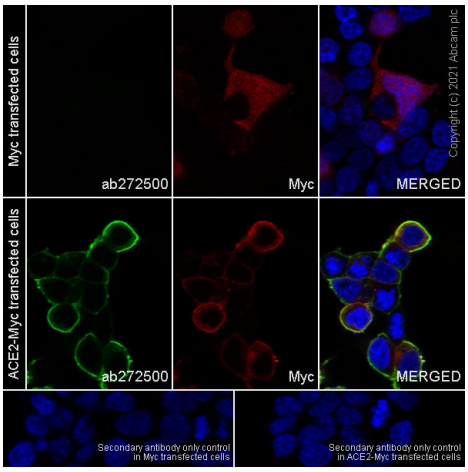


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ACE2 antibody [EPR24705-45] (ab272500)

Immunohistochemical analysis of paraffin-embedded Human testis tissue labelling ACE2 with ab272500 at 1/100 (5.0 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Membranous and cytoplasmic staining in human testis. The section was incubated with ab272500 for 30 mins at room temperature. 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) .

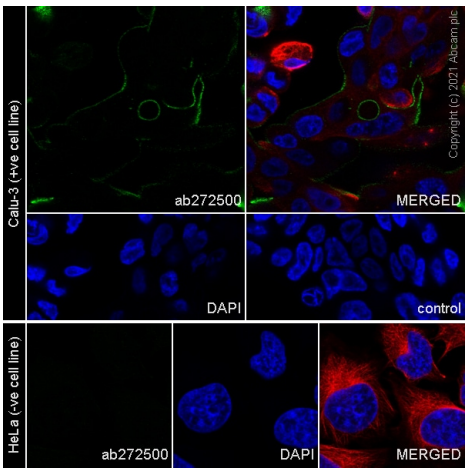
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-ACE2 antibody [EPR24705-45] (ab272500)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized 293T cells labelling ACE2 with ab272500 at 1/250 (2.0 ug/ml) dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing positive staining in HEK-293T cells transfected with myc-tagged ACE2 expression vector. Myc-Tag Mouse mAb (Alexa Fluor® 647) was used at 1/100 dilution (Red). The Nuclear counterstain was DAPI (Blue).

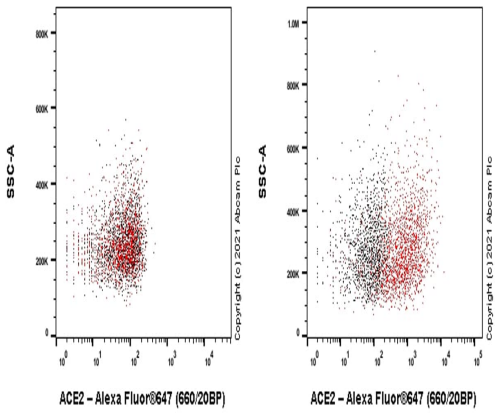
Secondary antibody only control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-ACE2 antibody [EPR24705-45] (ab272500)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Calu-3 cells labelling ACE2 with ab272500 at 1/50 (10.0 ug/ml) dilution, followed by **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing membranous staining in subsets of Calu-3 cells. **Negative control**: HeLa (PMID: 32926098). **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) (Red) was used at 1/200 dilution. The Nuclear counterstain was DAPI (Blue).

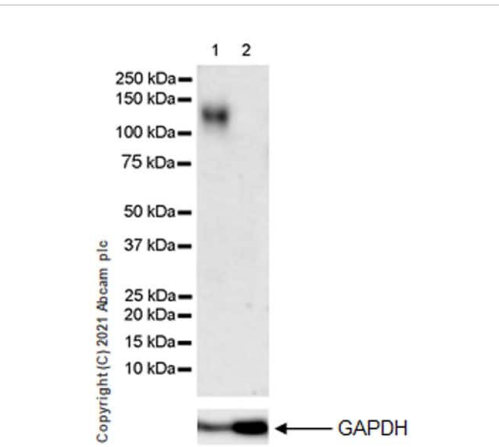
Secondary antibody only control: Secondary antibody is **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Flow Cytometry - Anti-ACE2 antibody [EPR24705-45] (ab272500)

Flow cytometric analysis of HeLa (Human cervix adenocarcinoma epithelial cell, Left)/ Calu-3 (human lung adenocarcinoma epithelial cell, Right) cells labelling ACE2 with ab272500 at 1/500 dilution (0.1ug). Goat anti rabbit IgG (Alexa Fluor® 647, **ab150079**) at 1/2000 dilution was used as the secondary antibody.

Negative control: HeLa (PMID: 32926098). Gated on viable cells.



Western blot - Anti-ACE2 antibody [EPR24705-45] (ab272500)

All lanes : Anti-ACE2 antibody [EPR24705-45] (ab272500) at 1/1000 dilution

Lane 1 : Calu-3 (Human lung adenocarcinoma epithelial cell) whole cell lysate 20
Lane 2 : HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate

Secondary
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) at 1/20000 dilution

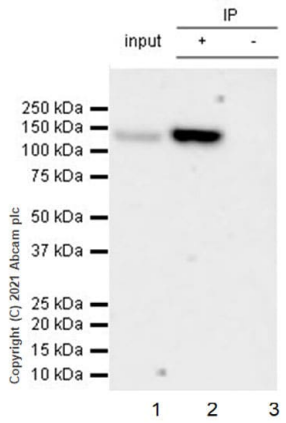
Predicted band size: 92 kDa
Observed band size: 120 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID:33008593).

Negative control: HeLa (PMID:32926098).

Exposure time: 3 minutes



Immunoprecipitation - Anti-ACE2 antibody [EPR24705-45] (ab272500)

ACE2 was immunoprecipitated from 0.35 mg Human testis lysate with ab272500 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab272500 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (**ab131366**) was used at 1/5000 dilution.

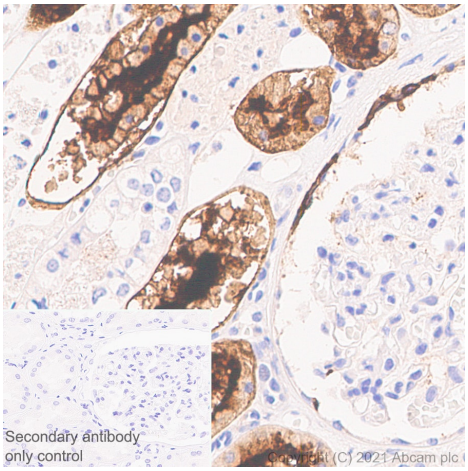
Lane 1: Human testis lysate 10 ug

Lane 2: ab272500 IP in Human testis lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab272500 in human testis whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 32 seconds

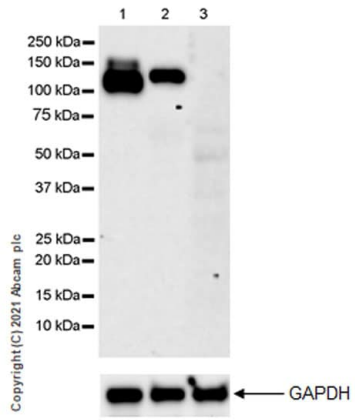


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ACE2 antibody [EPR24705-45] (ab272500)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labelling ACE2 with ab272500 at 1/100 (5.0 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous and cytoplasmic staining in human kidney. The section was incubated with ab272500 for 30 mins at room temperature.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.



Western blot - Anti-ACE2 antibody [EPR24705-45] (ab272500)

All lanes : Anti-ACE2 antibody [EPR24705-45] (ab272500) at 1/1000 dilution

Lane 1 : Human kidney tissue lysate

Lane 2 : Human testis tissue lysate

Lane 3 : Human liver tissue lysate

Secondary

All lanes : VeriBlot for IP secondary antibody(HRP)(**ab131366**) at 1/1000 dilution

Predicted band size: 92 kDa

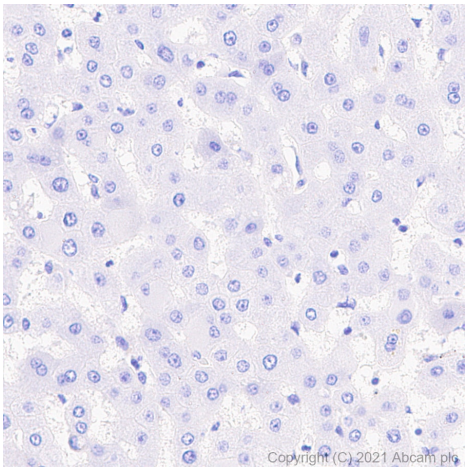
Observed band size: 120 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID:10924499, PMID: 32661139).

Negative control: liver (PMID:10924499).

Exposure time: 3 minutes

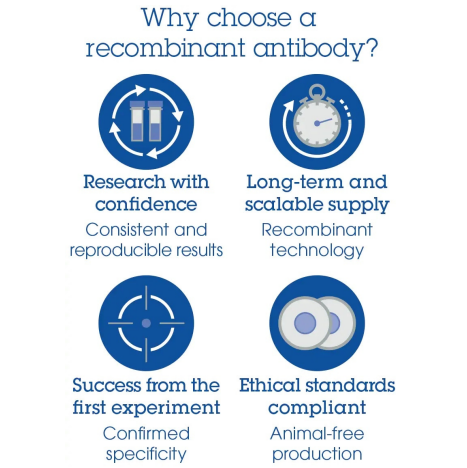


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ACE2 antibody [EPR24705-45] (ab272500)

Immunohistochemical analysis of paraffin-embedded Human liver tissue labelling ACE2 with ab272500 at 1/100 (5.0 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). **Negative control:** No staining in human liver. The section was incubated with ab272500 for 30 mins at room temperature. 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.



Anti-ACE2 antibody [EPR24705-45] (ab272500)

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