

## Product datasheet

### Anti-ACE2 antibody [EPR4435(2)] ab108252

KO VALIDATED

Recombinant

RabMAb

★★★★★ [9 Abreviews](#) [121 References](#) [13 Images](#)

#### Overview

<b>Product name</b>	Anti-ACE2 antibody [EPR4435(2)]
<b>Description</b>	Rabbit monoclonal [EPR4435(2)] to ACE2
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IP, IHC-P, Indirect ELISA <b>Unsuitable for:</b> Flow Cyt or ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. (Peptide available as <a href="#">ab198988</a> )
<b>Positive control</b>	WB: Human testis, kidney and lung tissue lysates; Human fetal kidney tissue lysate; Calu-3, HepG2 and Caco-2 cell lysates. Human and rat heart tissue lysate; Human lung tissue lysate; Mouse and rat spleen, testis lung tissue lysate; IHC-P: Human, mouse, and rat kidney tissues. IP: Human testis tissue lysate.
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> For more information <a href="#">see here</a> . Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.5% BSA
<b>Purity</b>	Protein A purified

<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR4435(2)
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab108252 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

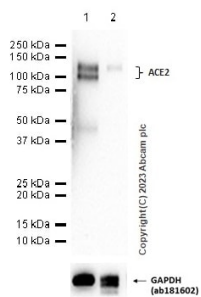
Application	Abreviews	Notes
<b>WB</b>	★★★★★ (5)	1/1000 - 1/10000. Predicted molecular weight: 92 kDa. Can be blocked with <b>ACE2 peptide (ab198988)</b> .
<b>IP</b>		1/10 - 1/100.
<b>IHC-P</b>	★★★★★ (1)	1/6400 - 1/32000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. <b>For unpurified use at 1/100 - 1/250.</b>
<b>Indirect ELISA</b>		Use at an assay dependent concentration.

**Application notes** Is unsuitable for Flow Cyt or ICC/IF.

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	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.
<b>Sequence similarities</b>	Belongs to the peptidase M2 family.
<b>Post-translational modifications</b>	N-glycosylation on Asn-90 may limit SARS infectivity.
<b>Cellular localization</b>	Secreted and Cell membrane.

## Images



Western blot - Anti-ACE2 antibody [EPR4435(2)]  
(ab108252)

**All lanes :** Anti-ACE2 antibody [EPR4435(2)] (ab108252) at 1/1000 dilution

**Lane 1 :** Human heart tissue lysate

**Lane 2 :** Rat heart tissue lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

**Predicted band size:** 92 kDa

**Observed band size:** 110,120 kDa

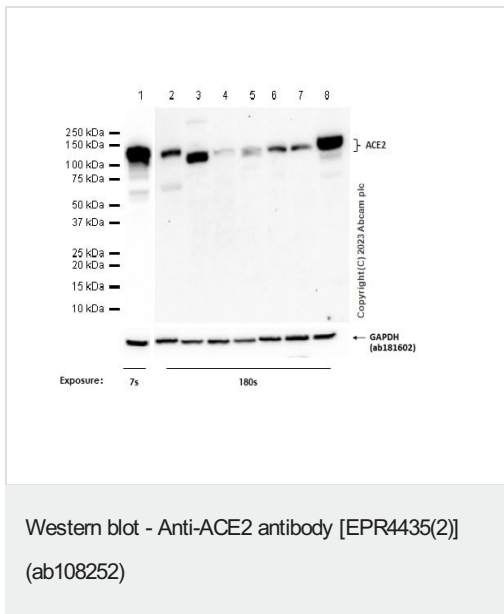
**Exposure time:** 180 seconds

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

**ab181602** was used as a GAPDH loading control.

Two bands observed by ab108252 corresponding to glycosylation and non-glycosylation forms.

Signal in heart tissue is low, we recommend loading more amount of lysate or using lower antibody dilution to improve result.



**All lanes :** Anti-ACE2 antibody [EPR4435(2)] (ab108252) at 1/1000 dilution

**Lane 1 :** Human testis tissue lysate at 20 µg

**Lane 2 :** Human lung tissue lysate at 20 µg

**Lane 3 :** Mouse testis tissue lysate

**Lane 4 :** Mouse spleen tissue lysate

**Lane 5 :** Mouse lung tissue lysate

**Lane 6 :** Rat testis tissue lysate

**Lane 7 :** Rat spleen tissue lysate

**Lane 8 :** Rat lung tissue lysate

### Secondary

**All lanes :** Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

**Predicted band size:** 92 kDa

**Observed band size:** 110,120 kDa

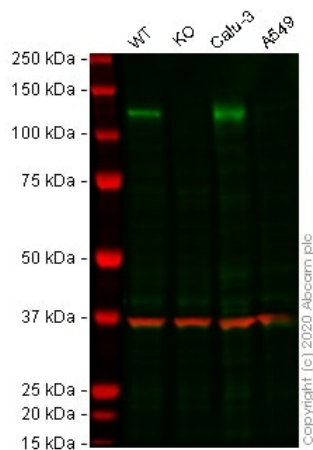
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

**ab181602** was used as GAPDH loading control.

Exposure time: Lane 1: 7 seconds; Lane 2-8: 180 seconds.

Two bands observed by ab108252 corresponding to glycosylation and non-glycosylation forms.

Signal in mouse and rat tissues are low, we recommend loading more amount of lysate or using lower antibody dilution to improve result.



Western blot - Anti-ACE2 antibody [EPR4435(2)]  
(ab108252)

**All lanes :** Anti-ACE2 antibody [EPR4435(2)] (ab108252) at 1/1000 dilution

**Lane 1 :** Wild-type HepG2 cell lysate

**Lane 2 :** ACE2 knockout HepG2 cell lysate

**Lane 3 :** Calu-3 cell lysate

**Lane 4 :** A549 cell lysate

Lysates/proteins at 30 µg per lane.

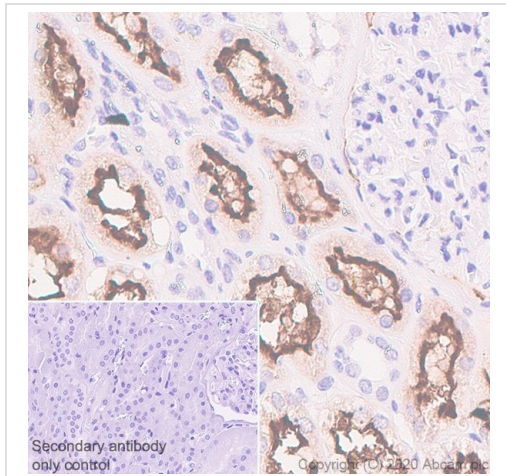
Performed under reducing conditions.

**Predicted band size:** 92 kDa

**Observed band size:** 130 kDa

**Lanes 1 - 4:** Merged signal (red and green). Green - ab108252 observed at 130 kDa. Red - loading control **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab108252 was shown to react with ACE2 in wild-type HepG2 cells in western blot with loss of signal observed in ACE2 knockout cell line **ab273733** (knockout cell lysate **ab275495**). Wild-type and ACE2 knockout HepG2 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab108252 and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

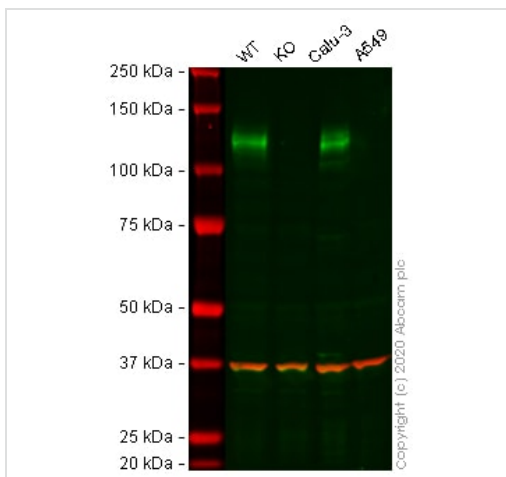


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ACE2 antibody [EPR4435(2)] (ab108252)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue labeling ACE2 with ab108252 at 1/6400 dilution. Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes. Staining was visualised using Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

The section was incubated with ab108252 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-ACE2 antibody [EPR4435(2)] (ab108252)

**All lanes :** Anti-ACE2 antibody [EPR4435(2)] (ab108252) at 1/1000 dilution

**Lane 1 :** Wild-type Caco-2 cell lysate

**Lane 2 :** ACE2 knockout Caco-2 cell lysate

**Lane 3 :** Calu-3 cell lysate

**Lane 4 :** A549 cell lysate

Lysates/proteins at 30 µg per lane.

Performed under reducing conditions.

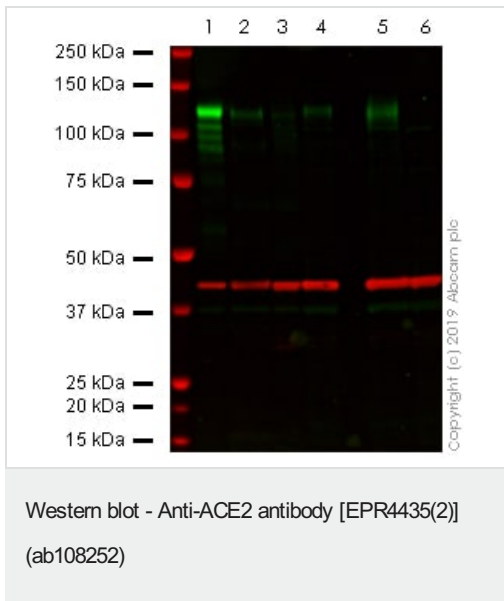
**Predicted band size:** 92 kDa

**Observed band size:** 125 kDa

**Lanes 1 -4:** Merged signal (red and green). Green - ab108252 observed at 125 kDa. Red - loading control [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab108252 was shown to react with ACE2 in Caco-2 wild-type cells in western blot with loss of signal observed in ACE2 knockout cell line [ab273731](#) (knockout cell lysate [ab275516](#)). Wild-type and ACE2 knockout Caco-2 cell lysates were subjected to SDS-PAGE. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with ab108252 and [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 Dilution and a 1 in 20000 dilution respectively. Blots were

incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



**All lanes :** Anti-ACE2 antibody [EPR4435(2)] (ab108252) at 1/1000 dilution

**Lane 1 :** Human testis cell lysate

**Lane 2 :** Human kidney cell lysate

**Lane 3 :** Human lung cell lysate

**Lane 4 :** HepG2 cell lysate

**Lane 5 :** Caco-2 cell lysate

**Lane 6 :** A549 cell lysate (negative control)

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

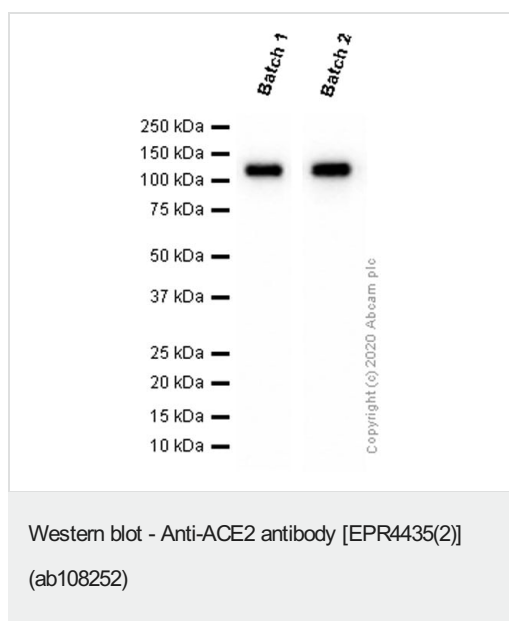
**Predicted band size:** 92 kDa

**Observed band size:** 120 kDa

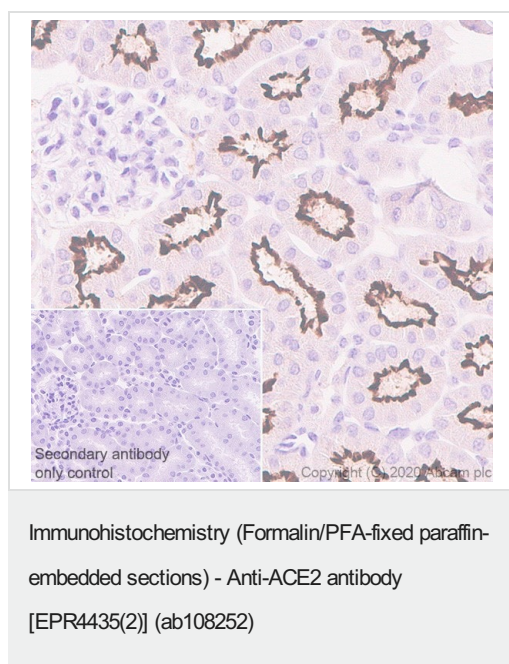
**Lanes 1 - 6:** Merged signal (red and green). Green - ab108252 observed at 120 kDa. Red - loading control, Mouse anti-Actin observed at 42kDa.

ab108252 was shown to react with ACE2 in western blot. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab108252 and Mouse anti Actin overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

Absence of ACE2 expression in A549 cells aligns with previously reported mRNA and protein data (PMID 16282461; fig.2b and 2c).



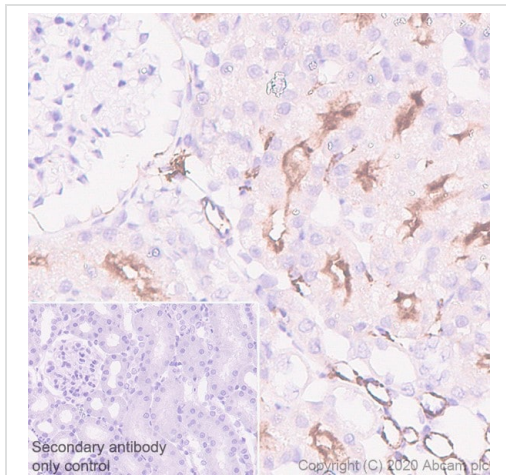
Different batches of ab108252 were tested on Human kidney lysate at 0.2 µg/ml. 15 µg of lysate was loaded in each lane. Bands observed at 120 kDa.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue labeling ACE2 with ab108252 at 1/6400 dilution. Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes. Staining was visualised using Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

The section was incubated with ab108252 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

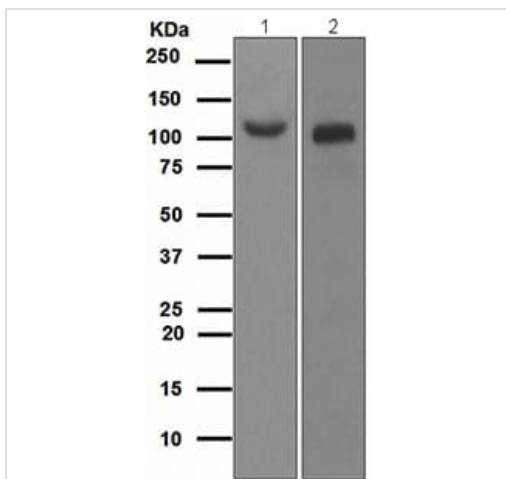


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ACE2 antibody [EPR4435(2)] (ab108252)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue labeling ACE2 with ab108252 at 1/6400 dilution. Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes. Staining was visualised using Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

The section was incubated with ab108252 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-ACE2 antibody [EPR4435(2)] (ab108252)

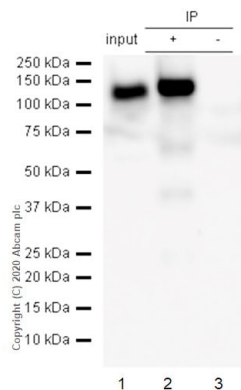
**All lanes :** Anti-ACE2 antibody [EPR4435(2)] (ab108252) at 1/1000 dilution

**Lane 1 :** Human fetal kidney lysate

**Lane 2 :** Human testis lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 92 kDa



Immunoprecipitation - Anti-ACE2 antibody  
[EPR4435(2)] (ab108252)

ab108252 Immunoprecipitating ACE2 in human testis tissue lysate. 0.35 mg of tissue lysate was incubated with 0.6 µg primary antibody (1/20). For western blotting a HRP-conjugated Veriblot for IP Detection Reagent (**ab131366**) (1/1000) was used to confirm successful immunoprecipitation.

Exposure time: 1 second.

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.

**All lanes :** Anti-ACE2 antibody [EPR4435(2)] (ab108252) at 1/500 dilution

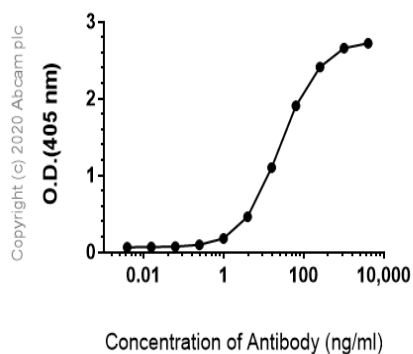
**Lane 1 :** Human testis tissue lysate at 10 µg

**Lane 2 :** ab108252 + Human testis tissue lysate

**Lane 3 :** Rabbit monoclonal IgG (**ab172730**) instead of ab108252 in Human testis tissue lysate

**Observed band size:** 110 kDa

Indirect ELISA antibody dose-response curve  
antigen at 1000 ng/ml



Indirect ELISA - Anti-ACE2 antibody [EPR4435(2)]  
(ab108252)

ELISA using ab108252 at varying antibody concentrations (4000~0 ng/ml) and antigen concentration at 1000 ng/mL. An Alkaline Phosphatase-conjugated Goat Anti-Rabbit IgG (H+L) (1/2500) was used as the secondary antibody.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-ACE2 antibody [EPR4435(2)] (ab108252)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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