

## Product datasheet

# Anti-ACE2 antibody [EPR4436] ab108209

**KO VALIDATED** Recombinant RabMAB

★★★★☆ [7 Abreviews](#) [19 References](#) [8 Images](#)

### Overview

<b>Product name</b>	Anti-ACE2 antibody [EPR4436]
<b>Description</b>	Rabbit monoclonal [EPR4436] to ACE2
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IP, IHC-P <b>Unsuitable for:</b> ELISA, Flow Cyt or ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Does not react with:</b> Mouse
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Human testis, kidney and lung lysates; Human fetal kidney lysates; Calu-3, HepG2 and Caco-2 cell lysates. IHC-P: Human kidney and testis tissue. IP: Human testis tissue lysate.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <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> <p>For more information <a href="#">see here</a>.</p> <p>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>.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

### 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. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant

<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR4436
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab108209 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
WB	★★★★☆ (3)	1/1000 - 1/10000. Predicted molecular weight: 92 kDa.
IP		1/10 - 1/100.
IHC-P	★★★★★ (1)	1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. Heat up to 98°C, below boiling, and then let cool for 10-20 minutes. The use of an HRP/AP polymerized secondary antibody is recommended.

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

## 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.

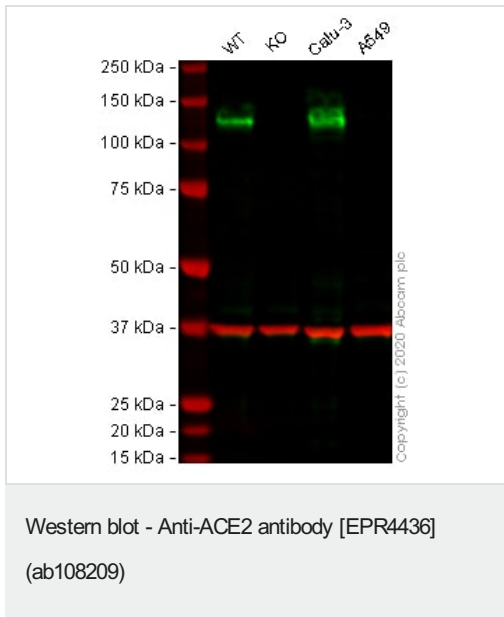
**Tissue specificity** Expressed in endothelial cells from small and large arteries, and in arterial smooth muscle cells. Expressed in lung alveolar epithelial cells, enterocytes of the small intestine, Leydig cells and Sertoli cells (at protein level). Expressed in heart, kidney, testis, and gastrointestinal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



**All lanes** : Anti-ACE2 antibody [EPR4436] (ab108209) 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.

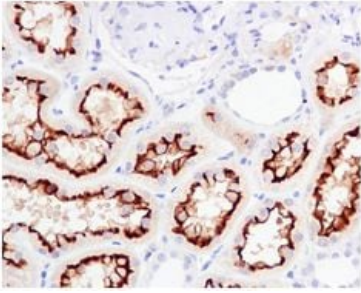
Performed under reducing conditions.

**Predicted band size:** 92 kDa

**Observed band size:** 130 kDa

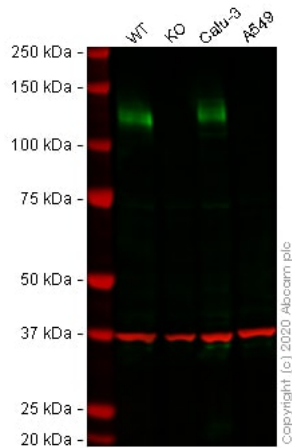
**Lanes 1 - 4:** Merged signal (red and green). Green - ab108209 observed at 130 kDa. Red - loading control **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab108209 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 ab108209 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 [EPR4436] (ab108209)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue labelling ACE2 with ab108209 at 1/100. Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.



Western blot - Anti-ACE2 antibody [EPR4436] (ab108209)

**All lanes** : Anti-ACE2 antibody [EPR4436] (ab108209) 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.

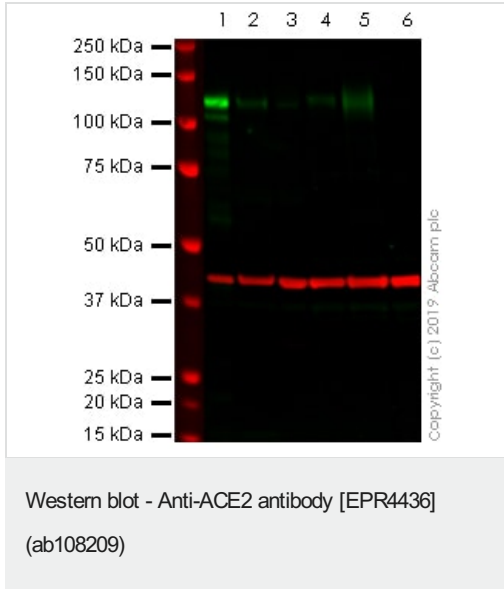
**Predicted band size:** 92 kDa

**Observed band size:** 125 kDa

**Lanes 1 - 4:** Merged signal (red and green). Green - ab108209 observed at 125 kDa. Red - loading control **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab108209 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 ab108209 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 [EPR4436] (ab108209) 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.

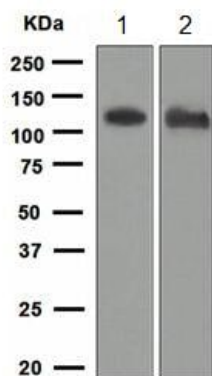
Performed under reducing conditions.

**Predicted band size:** 92 kDa

**Observed band size:** 120 kDa

**Lanes 1 - 6:** Merged signal (red and green). Green - ab108209 observed at 120 kDa. Red - loading control, Mouse anti-Actin observed at 42kDa.

ab108209 was shown to react with ACE2 in western blot. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab108209 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).



Western blot - Anti-ACE2 antibody [EPR4436] (ab108209)

**All lanes :** Anti-ACE2 antibody [EPR4436] (ab108209)

**Lane 1 :** Human fetal kidney lysate

**Lane 2 :** Human testis lysate

Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes :** HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 92 kDa

**Observed band size:** 115 kDa



Immunoprecipitation - Anti-ACE2 antibody [EPR4436] (ab108209)

ab108209 Immunoprecipitating ACE2 in human testis tissue lysate. 0.35 mg of tissue lysate was incubated with 2 µg primary antibody (1/30). 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.

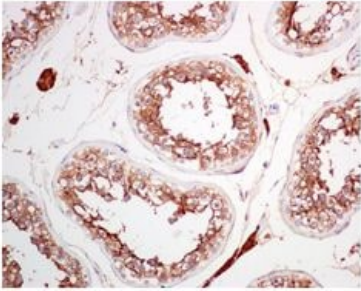
**All lanes :** Anti-ACE2 antibody [EPR4436] (ab108209) at 1/500 dilution

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

**Lane 2 :** ab108209 + Human testis tissue lysate

**Lane 3 :** Rabbit monoclonal IgG (**ab172730**) instead of ab108209 in Human testis tissue lysate

**Observed band size:** 110 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human testis tissue labelling ACE2 with ab108209 at 1/100. Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ACE2 antibody [EPR4436] (ab108209)

#### 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 [EPR4436] (ab108209)

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

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