

Datasheet for 600-401-X58**ACE2 Antibody****Overview**

Description:	Anti-ACE2 (RABBIT) Antibody - 600-401-X58
Item No.:	600-401-X58
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	Angiotensin-converting enzyme 2 (ACE2) plays a central role in vascular, renal, and myocardial physiology. In contrast to its homolog ACE, ACE2 expression is restricted to heart, kidney, and testis. Recently, ACE2 has also been shown to be a functional receptor of the SARS coronavirus. The normal function of ACE2 is to convert the inactive vasoconstrictor angiotensin I (AngI) to Ang1-9 and the active form AngII to Ang1-7, unlike ACE, which converts AngI to AngII. While the role of these vasoactive peptides is not well understood, lack of ACE2 expression in ace2-/ace2- mice leads to severely reduced cardiac contractility, indicating its importance in regulating heart function.
Synonyms:	ACE2 Antibody, ACEH, Angiotensin-converting enzyme 2, ACE-related carboxypeptidase, ACEH
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	ACE2
Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-ACE2 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids near the internal region of human ACE2.

Purity/Specificity:	Anti-ACE2 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. Anti-ACE2 has no cross response to ACE1. Predicted species reactivity based on immunogen sequence: Rat: (94%), Bovine: (94%).
Relevant Links:	• UniProtKB - Q9BYF1 • GeneID - 59272 • NCBI - NP_068576

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-ACE2 Antibody has been tested for use in ELISA, Immunofluorescence, Immunohistochemistry and Western Blotting. WB has been validated in human mouse, and rat samples, IHC and IF has been validated in human samples. Expect a band at ~93 kDa in size corresponding to ACE2 protein by Western Blotting in the appropriate cell lysate or extract. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	0.5-2µg/mL
IF:	20µg/mL
IHC:	2µg/mL
WB:	1 - 2 µg/mL

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

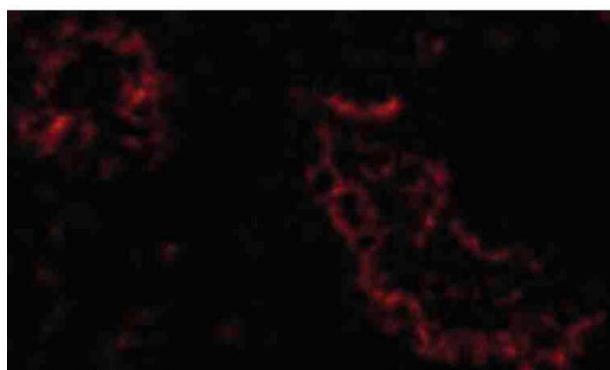
Shipping & Handling

Shipping Condition:	Dry Ice
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Storage Condition: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

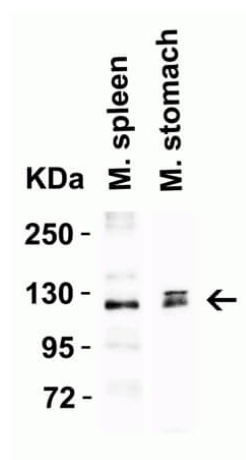
Expiration: Expiration date is one (1) year from date of receipt.

Images



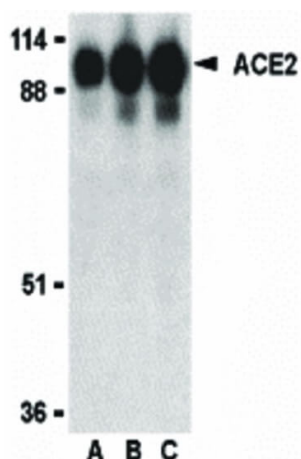
Immunofluorescence Microscopy

Immunofluorescence Microscopy of ACE2 antibody. Cell Type: human kidney cells. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: ACE2 antibody at 20 µg/mL for 1 h at RT. Secondary antibody: Fluorescein rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: ACE2 is located in the cell membrane and the cytoplasm. Staining: ACE2 as red fluorescent signal.



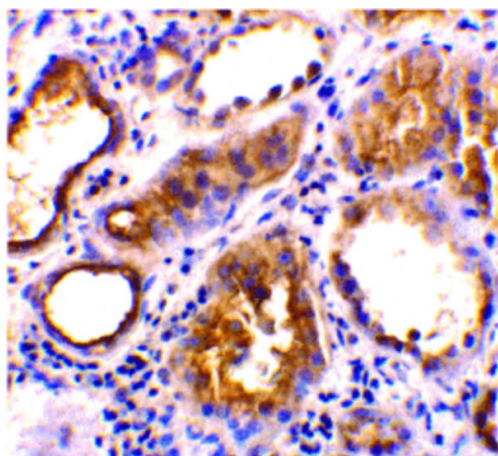
Western Blot

Western Blot of Anti-ACE2 Antibody. Lane 1: Mouse Spleen Lysate. Lane 2: Mouse Stomach Lysate. Load: 15 µg of lysates per lane. Primary Antibody: Anti-ACE2 2µg/mL for 1hr at RT in 5% BLOTTO/TBST. Secondary: Goat anti-rabbit IgG HRP conjugated at 1:10,000. Predicted MW: ~93kDa. Observed: ~125kDa.



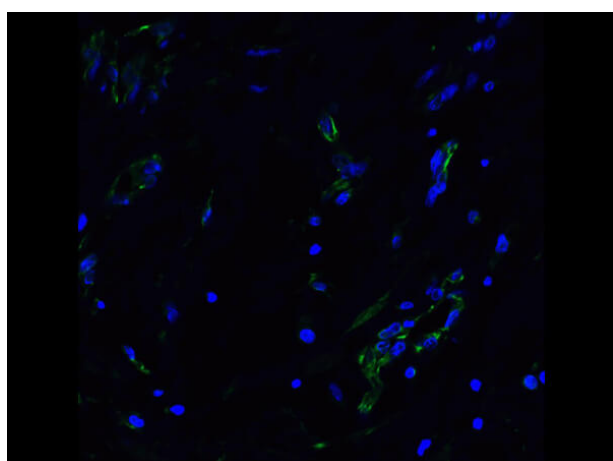
Western Blot

Western Blot of ACE2 antibody. Lane A: human kidney lysate at 0.5 µg/ml. Lane B: human kidney lysate at 1 µg/ml. Lane C: human kidney lysate at 2 µg/ml. Load: 35 µg per lane. Primary antibody: ACE2 antibody at designated concentrations for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted MW: 93 kDa. Observed MW: 95 kDa for ACE2. Other band(s): ACE2 splice variants and isoforms.



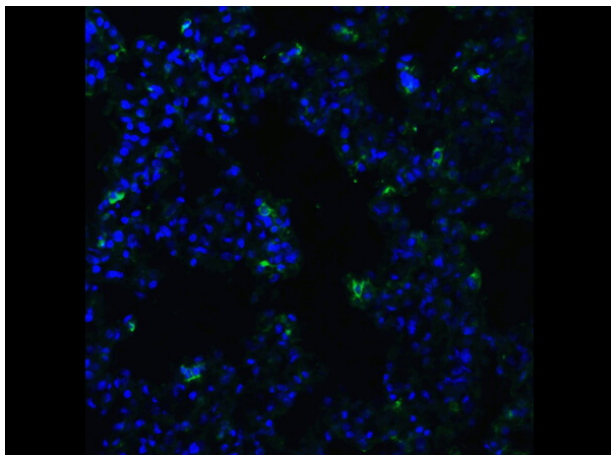
Immunohistochemistry

Immunohistochemistry of ACE2 antibody. Tissue: human kidney tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: ACE2 antibody at 2 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: ACE2 is located in the cell membrane and the cytoplasm. Staining: ACE2 as precipitated red signal.

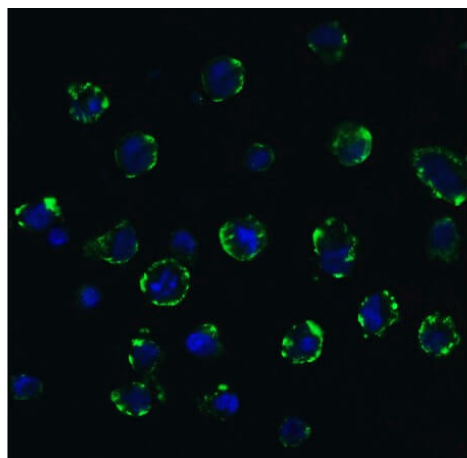


Immunofluorescence Microscopy

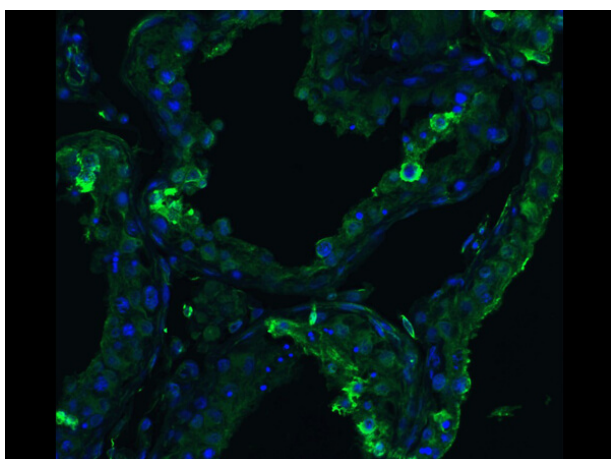
Immunofluorescence of Rb Anti-ACE2 Antibody. Tissue: Human Lung Tissue. Fixation: 4% PFA. Primary Antibody: Anti-ACE2 at 20µg/mL. Secondary Antibody: Goat anti-rabbit IgG secondary antibody at 1:500 dilution (green) and DAPI counterstain (blue).

**Immunofluorescence Microscopy**

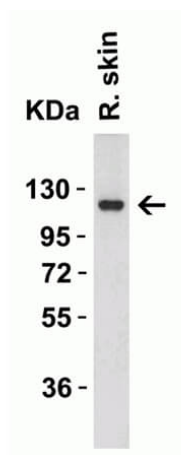
Immunofluorescence of Anti-ACE2 Antibody. Tissue: Rat Lung Tissue. Fixation: 4% PFA. Primary Antibody: Anti-ACE2 at 20 μ g/mL. Secondary Antibody: Goat anti-rabbit IgG secondary antibody at 1:500 dilution (green) and DAPI counterstain (blue).

**Immunofluorescence Microscopy**

Immunofluorescence of Rabbit Anti-ACE2 Antibody. Tissue: Caco2 cells. Fixation: 4% PFA. Primary antibody: Anti-ACE2 at 20 μ g/mL. Secondary Antibody: Goat Anti-rabbit IgG secondary antibody at 1:500 dilution (green) and DAPI counterstain (blue). Image showing membrane staining on Caco2 cells.

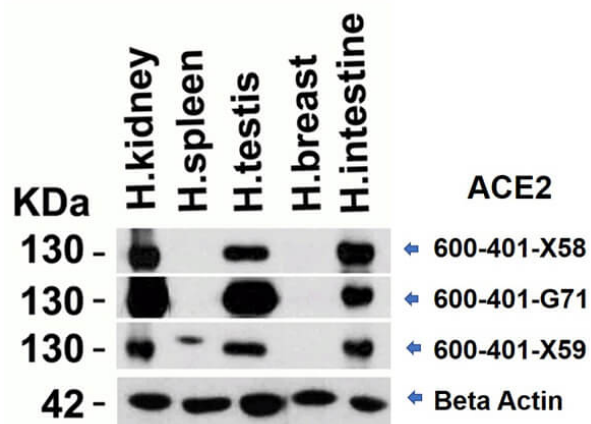
**Immunofluorescence Microscopy**

Immunofluorescence of Rabbit Anti-ACE2 Antibody. Tissue: Human Testis Tissue. Fixation: 4% PFA. Primary antibody: Anti-ACE2 at 20 μ g/mL. Secondary Antibody: Goat anti-rabbit IgG secondary antibody at 1:500 dilution (green) and DAPI counterstain (blue).



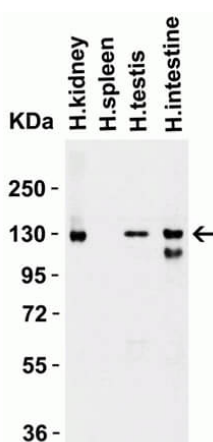
Western Blot

Western Blot of Rabbit Anti-ACE2 Antibody. Lane 1: Rat Skin Lysate. Load: 15 μ g of lysates per lane. Primary Antibody: Anti-ACE2 at 2 μ g/mL for 1h at RT in 5% BLOTTO/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Predicted MW: ~93kDa. Observed MW: ~125kDa.



Western Blot

Western Blot of different Rabbit anti-ACE2 antibodies. Lane 1: Human Kidney Lysate. Lane 2: Human Spleen Lysate. Lane 3: Human Testis Lysate. Lane 4: Human Breast Lysate. Lane 5: Human Intestine Lysate. Load: 15 μ g per lane. Primary antibody: ACE2 antibody (600-401-X58, 600-401-G71, 600-401-X59) at 2 μ g/mL and Beta Actin at 1 μ g/mL for 1hr at RT. Secondary antibody: Goat anti-Rabbit secondary HRP antibody. Block: 5% BLOTTO/TBST. Predicted MW: ~93kDa. Observed: ~130kDa.



Western Blot

Western Blot of Rabbit anti-ACE2 Antibody. Lane 1: Human Kidney Lysate. Lane 2: Human Spleen Lysate. Lane 3: Human Testis Lysate. Lane 4: Human Intestine Lysate. Loading: 15 μ g of lysates per lane. Primary Antibody: Anti-ACE2 at 2 μ g/mL for 1hr at RT in 5% BLOTTO/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Predicted MW: ~93kDa. Observed MW: ~130 kDa.

References

- Zorad S et al. Angiotensin I and II Stimulate Cell Invasion of SARS-CoV-2: Potential Mechanism via Inhibition of ACE2 Arm of RAS. *Physiol Res.* (2024)
- Kovacech B et al. Second Generation Antibodies Neutralize Emerging SARS-CoV-2 Variants of Concern. *bioRxiv* (2021)

Disclaimer

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