

Datasheet for 600-401-G71**ACE2 Antibody****Overview**

Description:	Anti-ACE2 (RABBIT) Antibody - 600-401-G71
Item No.:	600-401-G71
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	ACE2 antibody detects human ACE2. 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. Anti-ACE2 antibodies are ideal for investigators involved in enzyme and cardiovascular research.
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:	ACE2 Antibody was produced from whole rabbit serum prepared by repeated immunizations with a synthetic peptide corresponding to amino acids near the C-terminus of human ACE2.

Purity/Specificity: Anti-ACE2 Antibody was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross-reactivity with ACE2 with Human based on 100% homology with the immunizing sequence. Predicted species reactivity based on immunogen sequence: Bovine: (88%), Mouse: (78%), Rat: (78%). Cross-reactivity with ACE2 from other sources has not been determined. Anti-ACE2 has no cross response to ACE1.

Relevant Links:

- [NCBI - NP_068576](#)
- [UniProtKB - Q9BYF1](#)
- [GeneID - 59272](#)

Application Details

Tested Applications: ELISA, IF, IHC, WB

Application Note: Anti-ACE2 Antibody is tested for use in E, WB, IF, and IHC. Expect a band approximately ~92.4 kDa on specific lysates. Western Blot validated in human, mouse and rat samples. Immunohistochemistry and Immunofluorescence validated in human samples. 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: User Optimized

IF: 10µg/mL

IHC: 2µg/mL

WB: 0.5-2µg/mL

Formulation

Physical State: Liquid (sterile filtered)

Concentration: 1.0 mg/mL by UV absorbance at 280 nm

Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative: 0.02% (w/v) Sodium Azide

Stabilizer: None

Shipping & Handling

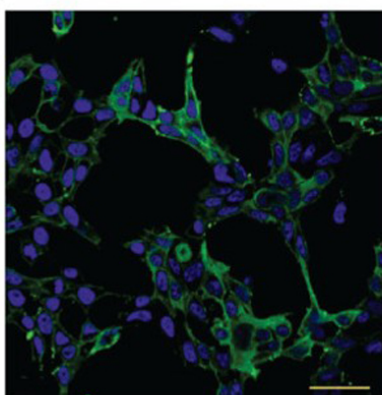
Shipping Condition: Wet Ice

Storage Condition: Antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures.

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

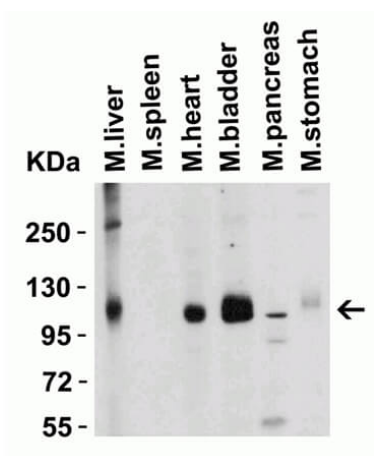
Images

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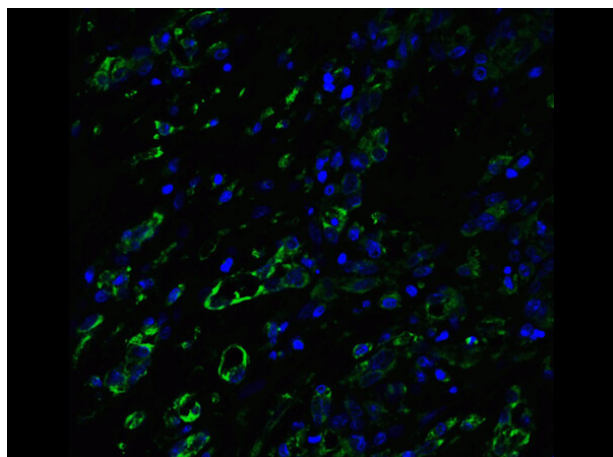
Immunofluorescence Microscopy

Characterization and use of HEK-ACE2 stable cell line. (a) Cytochemical and biochemical features of the model. The fluorescent photomicrographs of cells demonstrate the expression of ACE2 receptor on the cell surface (green: anti-ACE2 antibody, blue: nuclei stained with DAPI, scale bar: 20 μ m). Fig 1. PMID: 38466002



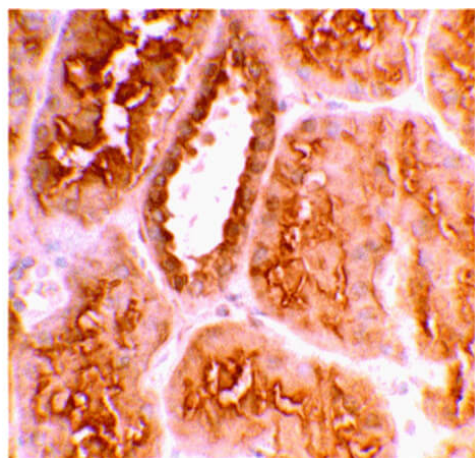
Western Blot

Western Blot of ACE2 Antibody. Lane 1: Mouse Liver Lysate. Lane 2: Mouse Spleen Lysate. Lane 3: Mouse Heart Lysate. Lane 4: Mouse Bladder Lysate. Lane 5: Mouse Pancreas Lysate. Lane 6: Mouse Stomach 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 Antibody: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Predicted MW: ~93kDa. Observed MW: ~125kDa.



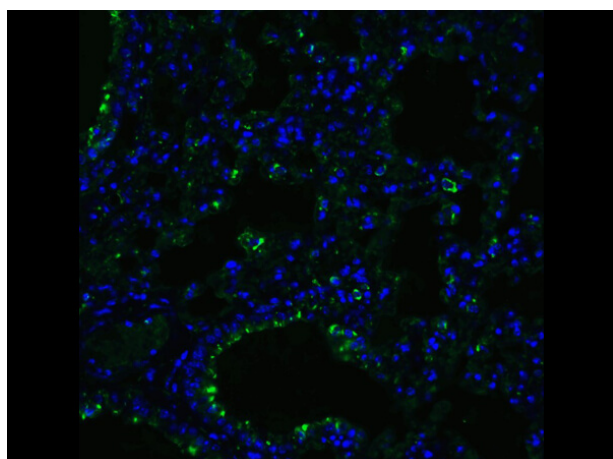
Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-ACE2 Antibody. Tissue: Human Lung Tissue. Fixative: 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).



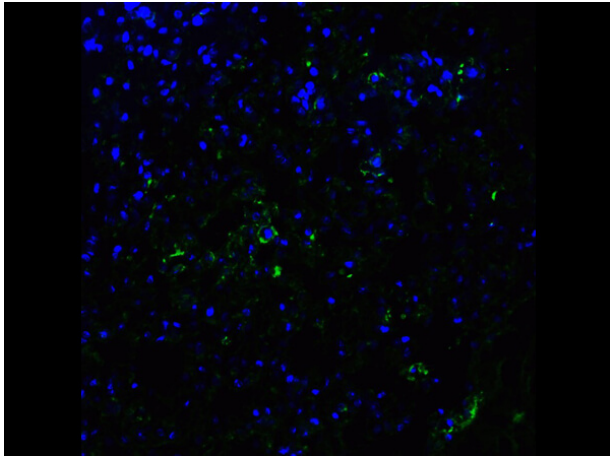
Immunohistochemistry

Immunohistochemistry of Anti-ACE2 Antibody. Tissue: Human Kidney Tissue. Fixation: formaldehyde and blocked with 10% serum for 1hr at RT. Antigen retrieval: heat mediation with Citrate Buffer pH6. Primary antibody: ACE2 antibody at 2µg/mL for overnight at 2-8°C. Secondary antibody: Goat Anti-rabbit HRP secondary antibody 1:250 for 45 min at RT. Counterstain: hematoxylin.

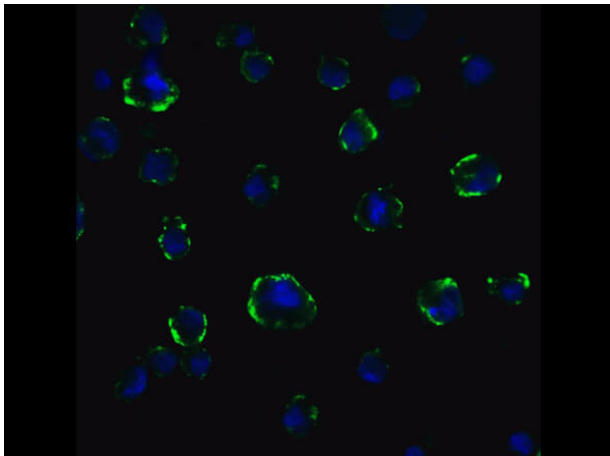


Immunofluorescence Microscopy

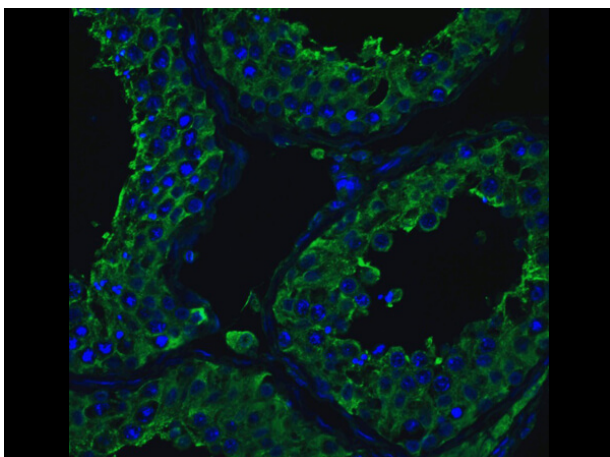
Immunofluorescence of Rb Anti-ACE2 Antibody. Tissue: Mouse Lung Tissue. Fixative: 4% PFA. Primary Antibody: Anti-ACE2 at 20µg/mL. Secondary Antibody: Goat anti-rabbit IgG secondary antibody at 1:500 dilution (green) and DAPI counterstain (blue).

**Immunofluorescence Microscopy**

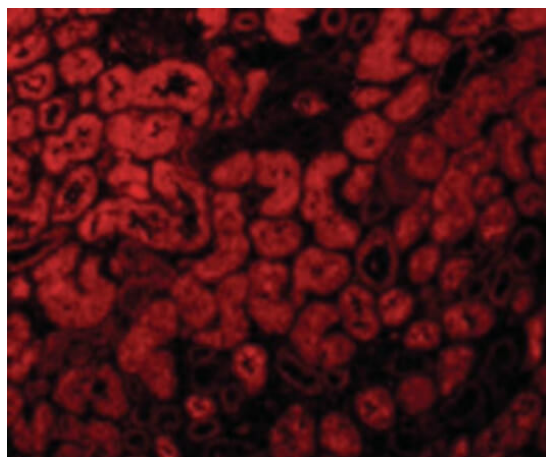
Immunofluorescence of Anti-ACE2 Antibody. Tissue: Rat Lung Tissue. Fixative: 4% PFA. Primary Antibody: Anti-ACE2 at 20µg/mL. Secondary Antibody: Goat anti-rabbit IgG secondary antibody at 1:500 dilution (green) and DAPI counterstain (blue).

**Immunofluorescence Microscopy**

Immunofluorescence of Rabbit Anti-ACE2 Antibody. Tissue: Caco2 Cells. Fixative: 4%PFA. Primary Antibody: Anti-ACE2 at 5µg/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.

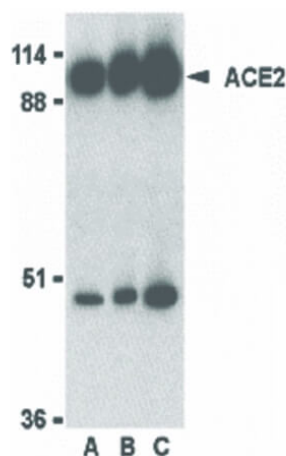
**Immunofluorescence Microscopy**

Immunofluorescence of Rabbit Anti-ACE2 Antibody. Tissue: Human Testis. Fixative: 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).



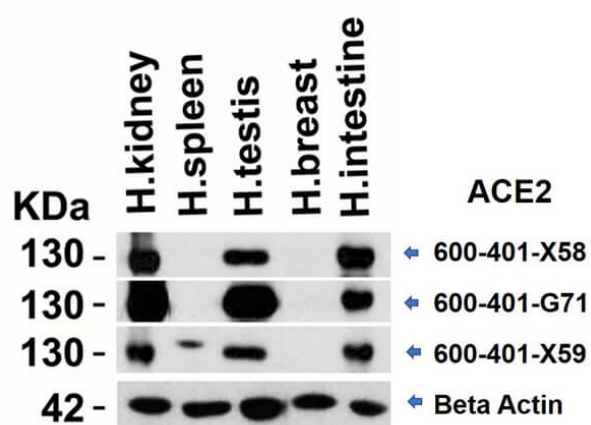
Immunofluorescence Microscopy

Immunofluorescence Microscopy of Rabbit Anti-ACE2 antibody. Tissue: Human Kidney Tissue. Fixation: 4% PFA. Primary antibody: ACE2 antibody at 10 µg/mL for overnight at 2-8°C. Secondary antibody: Goat Anti-Rabbit IgG Conjugated 1:500 for 1hr at RT.



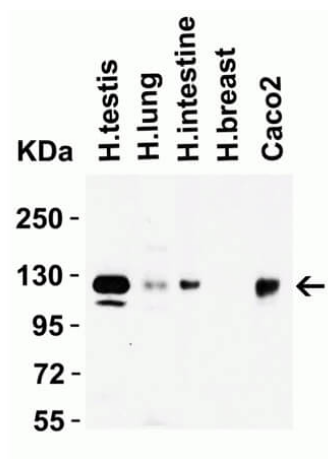
Western Blot

Western Blot of Rabbit Anti-ACE2 Antibody. Load: Human Kidney Lysate. Primary Antibody at - Lane A: 0.5 µg/mL, Lane B: 1.0 µg/mL, Lane C: 2.0 µg/mL. Expect: ~92kDa.



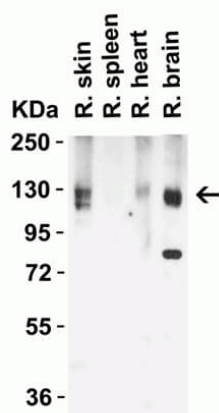
Western Blot

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 µg per lane. Primary antibody: ACE2 antibody (600-401-X58, 600-401-G71, 600-401-X59) at 2 µg/mL and Beta Actin at 1 µg/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 Testis Lysate. Lane 2: Human Lung Lysate. Lane 3: Human Intestine Lysate. Lane 4: Human Breast Lysate. Lane 5: Caco2 Lysate. Loading: 15 µg of lysates per lane. Primary Antibody: Anti-ACE2 at 2µg/mL for 1hr at RT in 5% BLOTTO/TBST. Secondary Antibody: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Predicted MW: ~93kDa. Observed MW: ~130kDa.



Western Blot

Western Blot of Rb Anti-ACE2 Antibody. Lane 1: Rat Skin Lysate. Lane 2: Rat Spleen Lysate. Lane 3: Rat Heart Lysate. Lane 4: Rat Brain Lysate. Loading: 15 µg of lysates per lane. Primary Antibody: Anti-ACE2 at 2µg/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: ~130kDa.

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)

Disclaimer

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