Anti-ACE2 Antibody [SN0754]

ET1611-58

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Hamster
Applications:	WB, IF-Cell, IHC-P, IP
Molecular Wt:	Predicted band size: 92 kDa
Clone number:	SN0754

Description: Angiotensin-converting enzyme (ACE) is a carboxyl-terminal dipeptidyl exopeptidase that converts angiotensin I to the potent vasopressive hormone, angiotensin II. There are two isoforms of ACE, the pulmonary ACEP and the testicular ACET. ACEP is a glycoprotein expressed in vascular endothelial cells of the lung, liver, adrenal cortex, pancreas, kidney and spleen. The ACET isoform is expressed exclusively in adult testis by developing sperm cells, specifically late pachytene spermatocytes. Additionally, ACE inactivates bradykinin, a vasodepressor peptide, and is involved in blood pressure regulation and fluid/electrolyte homeostasis. ACE2 is the first known human homolog of ACE. Unlike ACE, which is expressed ubiquitously throughout the vasculature, ACE2 is expressed only in cardiac, renal and testicular cells.

Immunogen: Synthetic peptide within Human ACE2 aa 181-230 / 805.

Positive control: HepG2 cell lysate, 293T cell lysate, rat brain tissue lysate, rat kidney tissue lysate, human kidney tissue lysate, human small intestine tissue lysate, mouse kidney tissue lysate, mouse testis tissue lysate, hamster testis lysates, hamster stomach tissue lysates, 293, MCF-7, HepG2, human kidney tissue, human testis tissue, mouse kidney tissue.

Subcellular location: Cell membrane, Cell projection, Cytoplasm, Membrane, Secreted.

Database links: SwissProt: Q9BYF1 Human | Q8R0I0 Mouse | Q5EGZ1 Rat | A0A1U7QTA1 Hamster

Recommended Dilutions:

WB	1:1,000-1:5,000
IF-Cell	1:100-1:500
IHC-P	1:50-1:1,000
IP	Use at an assay dependent concentration.

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

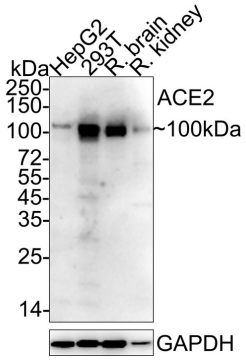

Fig1: Western blot analysis of ACE2 on different lysates with Rabbit anti-ACE2 antibody (ET1611-58) at 1/1,000 dilution.

Lane 1: HepG2 cell lysate
Lane 2: 293T cell lysate
Lane 3: Rat brain tissue lysate
Lane 4: Rat kidney tissue lysate

Lysates/proteins at 15 µg/Lane.

Predicted band size: 92 kDa
Observed band size: 100 kDa

Exposure time: 2 minutes; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1611-58) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

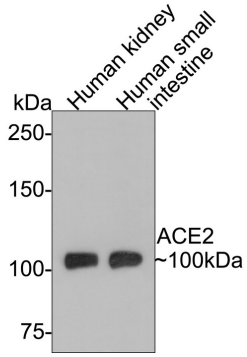

Fig2: Western blot analysis of ACE2 on different lysates with Rabbit anti-ACE2 antibody (ET1611-58) at 1/2,000 dilution.

Lane 1: Human kidney tissue lysate
Lane 2: Human small intestine tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 92 kDa
Observed band size: 100 kDa

Exposure time: 2 minutes;

6% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1611-58) at 1/2,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

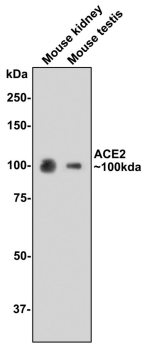

Fig3: Western blot analysis of ACE2 on different lysates with Rabbit anti-ACE2 antibody (ET1611-58) at 1/1,000 dilution.

Lane 1: Mouse kidney tissue lysate
Lane 2: Mouse testis tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 92 kDa
Observed band size: 100 kDa

Exposure time: 2 minutes;

8% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1611-58) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

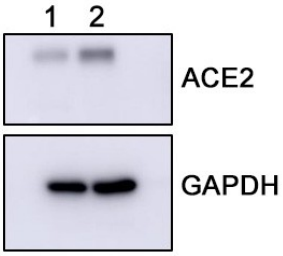

Fig4: Western blot analysis of ACE2 on Hamster testis (1) and stomach (2) tissue lysates using anti-ACE2 antibody at 1/1,000 dilution.

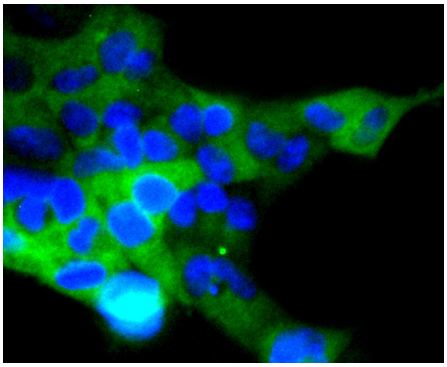

Fig5: ICC staining of ACE2 in 293 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ET1611-58, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

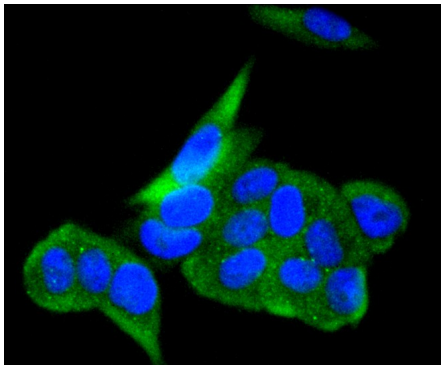

Fig6: ICC staining of ACE2 in MCF-7 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ET1611-58, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

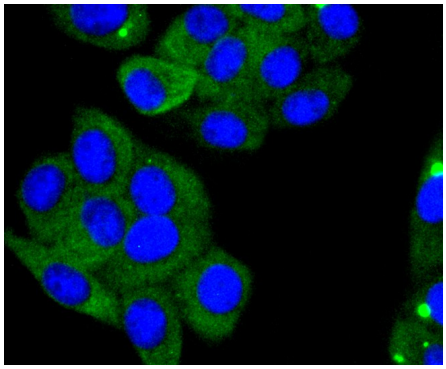

Fig7: ICC staining of ACE2 in HepG2 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ET1611-58, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

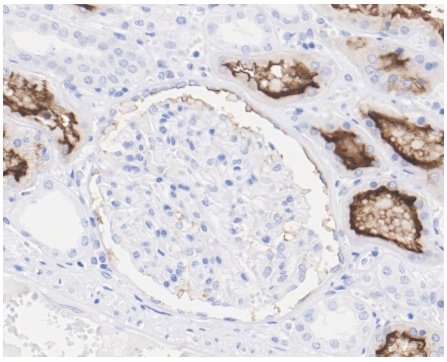

Fig8: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-ACE2 antibody (ET1611-58) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1611-58) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

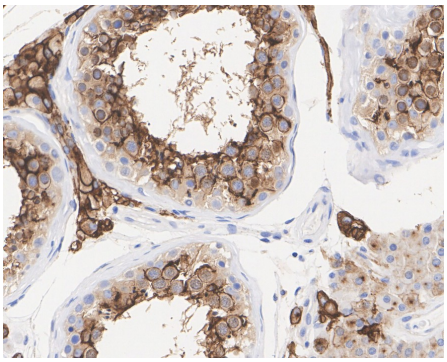

Fig9: Immunohistochemical analysis of paraffin-embedded human testis tissue with Rabbit anti-ACE2 antibody (ET1611-58) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1611-58) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

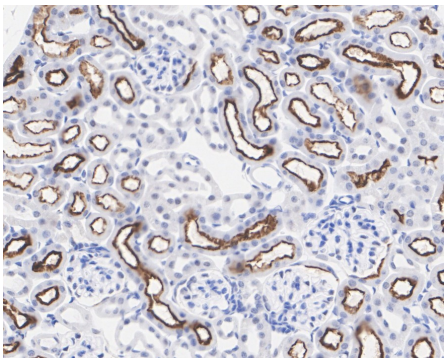

Fig10: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-ACE2 antibody (ET1611-58) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1611-58) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

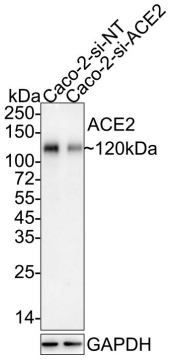

Fig11: Western blot analysis of ACE2 on different lysates with Rabbit anti-ACE2 antibody (ET1611-58) at 1/1,000 dilution.

Lane 1: Caco-2-si NT cell lysate
Lane 2: Caco-2-si ACE2 cell lysate

Lysates/proteins at 10 µg/Lane.

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

Exposure time: 1 minute 23 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1611-58) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Thatcher SE et al. Angiotensin-Converting Enzyme 2 Decreases Formation and Severity of Angiotensin II-Induced Abdominal Aortic Aneurysms. Arterioscler Thromb Vasc Biol 34:2617-23 (2014).
2. Honorato-Sampaio K et al. Evidence that angiotensin-(1-7) is an intermediate of gonadotrophin-induced oocyte maturation in the rat preovulatory follicle. Exp Physiol 97:642-50 (2012).