

Anti-ACE2 Antibody

Catalog Number: A00756

About 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. Homology modeling shows 2019-nCoV has a similar receptor-binding domain structure as SARS-CoV, which suggests **COVID-19 (2019-nCoV) may use ACE2 as a receptor in humans** for infection. 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.

Overview

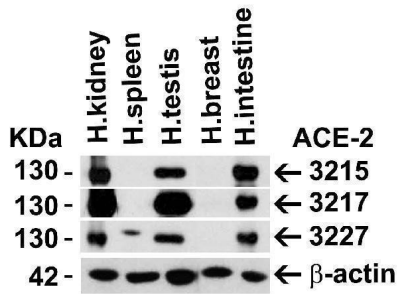
Product Name	Anti-ACE2 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-ACE2 Antibody (Catalog # A00756). Tested in ELISA, WB, IHC-P, IF applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, IF, IHC-P, WB
Clonality	Polyclonal
Formulation	ACE2 Antibody is supplied in PBS containing 0.02% sodium azide.
Storage Instructions	ACE2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. Avoid repeated freeze-thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Host	Rabbit
Uniprot ID	Q9BYF1

Technical Details

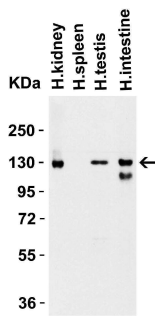
Immunogen	Anti-ACE2 antibody was raised against a peptide corresponding to 17 amino acids near the center of human ACE2. The immunogen is located within amino acids 180 - 230 of ACE2.
Predicted Reactive Species	Bovine
Cross Reactivity	Anti-ACE2 has no cross response to ACE1.
Isotype	IgG
Form	Liquid
Concentration	1 mg/mL

Purification	ACE2 Antibody is affinity chromatography purified via peptide column.
Suggested Dilutions	WB: 1-2 ug/mL; IHC: 2 ug/mL; IF: 20 ug/mL. Antibody validated: Western Blot in human, mouse and rat samples; Immunohistochemistry in human samples; Immunofluorescence in human and rat samples. All other applications and species not yet tested. Optimal dilutions for each application should be determined by the researcher.

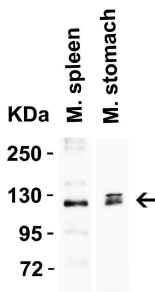
Anti-ACE2 Antibody (A00756) Images



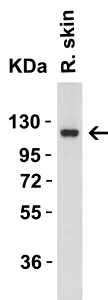
Independent Antibody Validation (IAV) via Protein Expression Profile in Human Tissues Loading: 15 ug of lysates per lane. Antibodies: ACE2, A00756 (2 ug/mL), ACE2, 3217 (2 ug/mL), ACE2, 3227 (2 ug/mL) and beta-actin 3779 (1 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



Western Blot Validation in Human Tissues Loading: 15 ug of lysates per lane. Antibodies: ACE2, A00756 (2 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

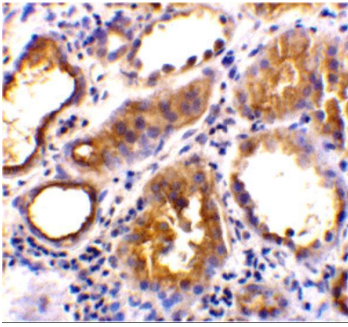


Western Blot Validation in Mouse Tissues Loading: 15 ug of lysates per lane. Antibodies: ACE2, A00756 (2 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

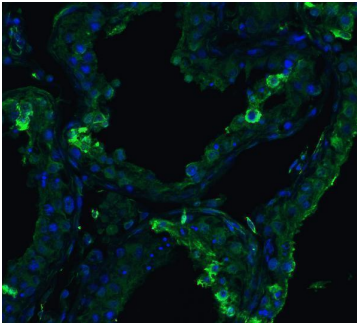


Western Blot Validation in Rat Skin Tissue Loading: 15 ug of lysates per lane. Antibodies: ACE2, A00756 (2 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

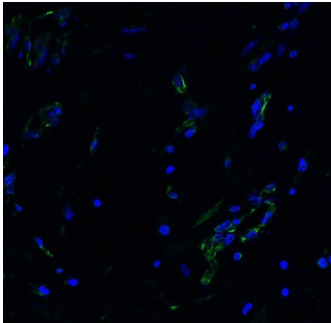
Immunohistochemistry Validation of ACE2 in Human Kidney Tissue Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-ACE2 antibody (A00756) at 2 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary.



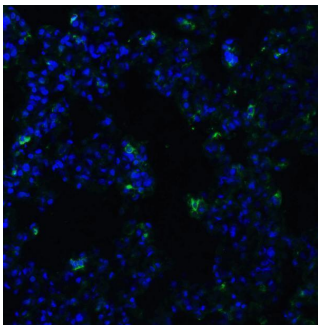
Counter stained with Hematoxylin.



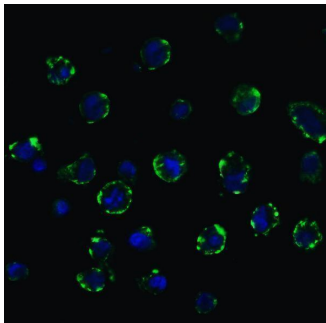
Immunofluorescence Validation of ACE2 in Human Testis
Tissue Immunofluorescent analysis of 4% paraformaldehyde-fixed human testis tissue labeling ACE-2 with A00756 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).



Immunofluorescence Validation of ACE2 in Human Lung
Tissue Immunofluorescent analysis of 4% paraformaldehyde-fixed human lung tissue labeling ACE-2 with A00756 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).



Immunofluorescence Validation of ACE2 in Rat Lung Tissue
Immunofluorescent analysis of 4% paraformaldehyde-fixed rat lung tissue labeling ACE-2 with A00756 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).



Immunofluorescence Validation of ACE2 In Caco2 Cells
Immunofluorescent analysis of 4% paraformaldehyde-fixed Caco2 cells labeling ACE2 with A00756 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue). Image showing membrane staining on Caco2 cells.

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Anti-ACE2 Antibody

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