

# PRODUCT INFORMATION



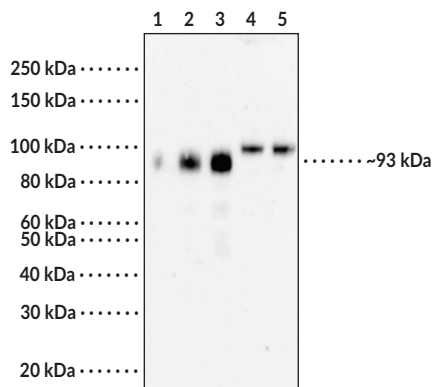
## ACE2 Polyclonal Antibody

Item No. 33336

### Overview and Properties

<b>Contents:</b>	This vial contains 500 µg of protein A-purified polyclonal antibody.
<b>Synonyms:</b>	ACE-related Carboxypeptidase, ACEH, Angiotensin-converting Enzyme 2, Angiotensin-converting Enzyme Homolog, Metalloprotease MPROT15
<b>Immunogen:</b>	Recombinant full-length human ACE2
<b>Cross Reactivity:</b>	(+) ACE2
<b>Species Reactivity:</b>	(+) Human, mouse
<b>Uniprot No.:</b>	Q9BYF1
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥3 years
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
<b>Host:</b>	Rabbit
<b>Applications:</b>	ELISA and Western blot (WB); the recommended starting dilution is 1:200 for ELISA and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Image



Lane 1: ACE2 protein (1 ng)  
Lane 2: ACE2 protein (5 ng)  
Lane 3: ACE2 protein (10 ng)  
Lane 4: Human kidney lysate (25 ng)  
Lane 5: Human kidney lysate (50 ng)

WB of human kidney lysates using ACE2 Polyclonal Antibody.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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Angiotensin-converting enzyme 2 (ACE2) is a carboxypeptidase and homolog of ACE1 that is encoded by ACE2 in humans.<sup>1,2</sup> It is a type I transmembrane protein composed of a cytoplasmic tail and an extracellular domain containing a HEMGH motif, characteristic of zinc-metallopeptidases, which exhibits carboxymonopeptidase activity.<sup>1</sup> ACE2 is expressed in vascular endothelial cells where it catalyzes the conversion of angiotensin II to the vasodilatory peptide angiotensin 1-7 to regulate systemic blood pressure and angiotensin I to angiotensin 1-9, a peptide that counter-regulates the function of angiotensin II.<sup>1-3</sup> It is also expressed in the epithelial cells of the kidney, heart, lung, small intestine, and liver and has roles in fluid homeostasis, cardiac contractility, and amino acid absorption, as well as the prevention of pulmonary fibrosis and hypertension. ACE2 also acts as a functional receptor for severe acute respiratory syndrome coronavirus (SARS-CoV) and SARS-CoV-2 to facilitate viral entry into host cells.<sup>4,5</sup> Cayman's ACE2 Polyclonal Antibody can be used for ELISA and Western blot (WB) applications. The antibody recognizes ACE2 at approximately 93 kDa from human and mouse samples.

## References

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1. Perlot, T. and Penninger, J.M. ACE2 - from the renin-angiotensin system to gut microbiota and malnutrition. *Microbes Infect.* **15(13)**, 866-873 (2013).
2. Santos, R.A.S., Sampaio, W.O., Alzamora, A.C., *et al.* The ACE2/angiotensin-(1-7)/MAS axis of the renin-angiotensin system: Focus on angiotensin-(1-7). *Physiol. Rev.* **98(1)**, 505-553 (2018).
3. Ocaranza, M.P., Moya, J., Barrientos, V., *et al.* Angiotensin-(1-9) reverses experimental hypertension and cardiovascular damage by inhibition of the angiotensin converting enzyme/Ang II axis. *J. Hypertens.* **32(4)**, 771-783 (2014).
4. Hoffmann, M., Kleine-Weber, H., Schroeder, S., *et al.* SARS-CoV-2 cell entry depends on ACE2 and TMPRSS2 and is blocked by a clinically proven protease inhibitor. *Cell* **181(2)**, 271-280 (2020).
5. Gurwitz, D. Angiotensin receptor blockers as tentative SARS-CoV-2 therapeutics. *Drug Dev. Res.* **81(5)**, 537-540 (2020).

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