

Human ACE-2 PE-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG Catalog Number: FAB933P 100 Tests

DESCRIPTION		
Species Reactivity	Human	
Specificity	Detects human ACE-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human ACE is observed.	
Source	Polyclonal Goat IgG	
Purification	Antigen Affinity-purified	
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ACE-2 Gln18-Ser740 Accession # Q9BYF1	
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm	
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.	
	*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions	

APPLICATIONS					
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.					
	Recommended Concentration	Sample			
Flow Cytometry	10 µL/10 <sup>6</sup> cells	HEK293 Human Cell Line Transfected with Human ACE-2 and eGF			

DATA		
Flow Cytometry	Detection of ACE-2 in HEK293 Human Cell Line Transfected with Human ACE-2 and eGPP by Flow Cytometry HEK293 human embryonic kidney cell line transfected with (A) human ACE-2 or (B) irrelevant protein, and eGPP was stained with Goat anti-Human Phycoerythrin-conjugated ACE-2 Polyclonal Antibody (Catalog # FAB933P). Quadrant markers were set based on Goat IgG Isotype Control (Catalog # IC108P, data not shown). Staining was performed using our Staining Membrane-Associated Proteins protocol.	
PREPARATION AND S	TORAGE	
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.	
Stability & Storage	torage Protect from light. Do not freeze.	
	<ul> <li>12 months from date of receipt, 2 to 8 °C as supplied</li> </ul>	∋d.

## BACKGROUND

Angiogensin I Converting Enzyme-2 (ACE-2), also called ACEH (ACE homolog), is a type I transmembrane zinc protease that cleaves angiotensins I and II to produce vasodilatory and anti-proliferative peptides. The balance between ACE-1 and ACE-2 activity is critical for maintaining cardiovascular, renal, and pulmonary function (1). ACE-2 also functions as the cellular uptake receptor for the SARS coronoavirus. Within the extracellular domain, human ACE-2 shares 83% as sequence identity with mouse and rat ACE-2. Human ACE-2 has about 40% amino acid identity to the N- and C-terminal domains of human somatic ACE. The predicted human ACE-2 protein sequence consists of 805 amino acids, including a N-terminal signal peptide, a single catalytic domain, a C-terminal membrane anchor, and a short cytoplasmic tail. ACE-2 mRNA is found at high levels in testis, kidney and heart and at moderate levels in colon, small intestine and ovary. Classical ACE inhibitors such as captopril and lisinopril do not inhibit ACE-2 activity. Novel peptide inhibitors of ACE-2 do not inhibit ACE activity (2). Genetic data from *Drosophila*, mice and rats show that ACE-2 is an essential regulator of heart function *in vivo* (3). ACE-2 isoforms of 75 kDa and 120 kDa are differentially expressed between lung and kidney, respectively, and a shed soluble form is generated by TACE/ADAM17 mediated cleavage.

## References:

- 1. Tipnis, S.R. et al. (2000) J. Biol. Chem. 275:33238.
- 2. Crackower, M.A. et al. (2002) Nature 417:822.
- 3. Huang, L. et al. (2003) J. Biol. Chem. 278:15532.

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