

Product Information

Cell Line:	HEK293 human ACE2
Tube Label:	HEK293 pcDNA_IN-WT-ACE2
Target:	Angiotensin-converting enzyme 2 (human ACE2)
Parental Cell Line:	HEK293
Organism:	<i>H. sapiens</i>
Tissue:	embryonal kidney
Morphology:	adherent fibroblastoid cells growing as monolayer
Mycoplasma Test: (provided by Eurofins Genomics)	negative
Biosafety Level:	1
Culture properties:	adherent

Background Information:

The human Angiotensin-Converting Enzyme 2 (hACE2) is a type I transmembrane metallopeptidase with homology to ACE, an regulator in the Renin-Angiotensin system (RAS) and long-known as a target for the treatment of hypertension.

hACE2 is expressed at the surface of cells of the human lungs, arteries, kidneys, heart and intestine – all tissues shown to harbor SARS-CoV. The function of ACE-2 is known as controlling blood pressure. This is accomplished by the hydrolysis of a small peptide hormone called Angiotensin II into angiotensin 1-7 by ACE and other endopeptidases. Angiotensin 1-7 acts in a vasoconstricting manner and is therefore involved in diabetes, hypertension and cardiac function in general.

Recently it became known, that the new Coronavirus SARS-CoV-2 uses ACE2 as the entry point into alveolar cells of the lungs, where it replicates and causes the Coronavirus disease (COVID-19).

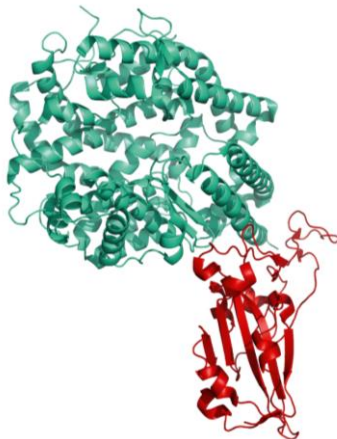


Fig. 1.: Structural model of the human ACE2 protein (amino acids 1-597, green) bound to the SARS-CoV-2 Spike S1 RBD domain (red).

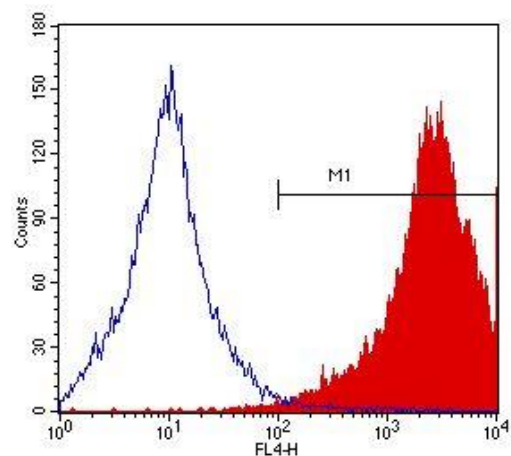


Fig. 2.: FACS analysis of stable HEK293 pcDNA_IN-WT-ACE2 cells stained with our SARS-CoV-2 S1(RBD) (P2020-001) and anti-His antibody (APC)

Blue: parental HEK293 cells; Red: HEK293 pcDNA_IN-WT-ACE2