Active Recombinant Rhesus monkey ACE2 protein, His-tagged

Cat. No. ACE2-206R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rhesus monkey ACE2 protein (Met1-Val739), fused to His-tag at the C-terminus, was expressed in HEK293.
Species	Rhesus macaque
Source	HEK293
ProteinLength	Met1-Val739
Description	Angiotensin-converting enzyme 2 (ACE2), a first homolog of ACE, regulates the renin angiotensin system (RAS) by counterbalancing ACE activity. Accumulating evidence in recent years has demonstrated a physiological and pathological role of ACE2 in the cardiovascular, renal and respiratory systems. ACE2 also has an important role in blood pressure control. This enzyme, an homolog of ACE, hydrolyzes angiotensin (Ang) I to produce Ang-(1-9), which is subsequently converted into Ang-(1-7) by a neutral endopeptidase and ACE. ACE2 releases Ang-(1-7) more efficiently than its catalysis of Ang-(1-9) by cleavage of Pro(7)-Phe(8) bound in Ang II. Thus, the major biologically active product of ACE2 is Ang-(1-7), which is considered to be a beneficial peptide of the RAS cascade in the cardiovascular system. A physiological role for ACE2 has been implicated in hypertension, cardiac function, heart function and diabetes, and as a receptor of the severe acute respiratory syndrome coronavirus. In the acute respiratory distress syndrome (ARDS), ACE, AngII, and AT1R promote the disease pathogenesis, whereas ACE2 and the AT2R protect from ARDS. Importantly, ACE2 has been identified as a key SARS-coronavirus receptor

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	and plays a protective role in severe acute respiratory syndrome (SARS) pathogenesis. Furthermore, the recent explosion of research into the ACE2 homolog, collectrin, has revealed a new physiological function of ACE2 as an amino acid transporter, which explains the pathogenic role of gene mutations in Hartnup disorder. This review summarizes and discusses the recently unveiled roles for ACE2 in disease pathogenesis.
Predicted N Terminal	Gln18
Form	Lyophilized from sterile 25mM Tris, 150mM NaCl, 1mM ZnCl2, pH 7.5, 5% trehalose, 5% mannitol and 0.01% Tween80.
Bio-activity	Measured by its ability to cleave a fluorogenic peptide substrate, Mca-YVADAPK (Dnp)-OH. The specific activity is >200 pmol/min/μg.
Molecular Mass	The recombinant rhesus ACE2 comprises 733 amino acids and has a calculated molecular mass of 85.1 kDa.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Purity	> 90% as determined by SDS-PAGE.
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4℃ before opening to recover the entire contents.

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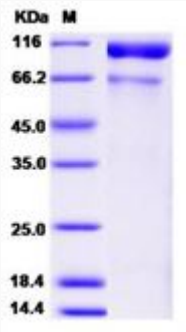
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name	ACE2
Official Symbol	ACE2
Synonyms	angiotensin I converting enzyme 2
Gene ID	712790
mRNA Refseq	NM_001135696.1
Protein Refseq	NP_001129168.1
UniProt ID	B6DUG6
SDS-PAGE of ACE2-206R	

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