Active Recombinant Human ACE2 protein, Fc/Avi-tagged, Biotinylated

Cat. No. ACE2-052H **Lot. No.** (See product label)

SPECIFICATION

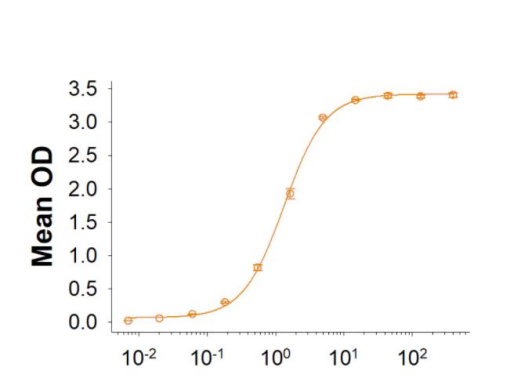
Product Overview	Biotinylated Recombinant Human ACE2(Gln18-Ser740) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Gln18-Ser740
Description	Angiotensin I Converting Enzyme (ACE2), also called ACEH (ACE homologue), is a dimeric, zinc-dependent metalloprotease of the ACE family that also includes somatic and germinal ACE (1, 2). ACE-2 mRNA is found at high levels in heart, testis, and kidney and at lower levels in a wide variety of tissues (1, 3). ACE-2 is the SARS-CoV and SARS-CoV2 Spike protein receptor in vivo (4-6), functions catalytically as a carboxypeptidase to cleave several substrates including angiotensins I and II, and acts as a partner for B0AT1-family amino acid transporters (1, 2). Through these functions, ACE-2 has been shown to be involved in several diseases including SARS, COVID19, acute lung injury (4, 7), heart disease (8), liver and lung fibrosis (9), inflammatory lung disease (10), and cardiopulmonary disease (11). Full length ACE-2 protein includes an extracellular region composed of a single N-terminal peptidase domain and C-terminal collectrin-like domain (CLD), a transmembrane domain, and a short cytoplasmic tail (12). The N-terminal peptidase region is required for binding to SARS-CoV and SARSCoV2 spike proteins, while the CLD contains a region that

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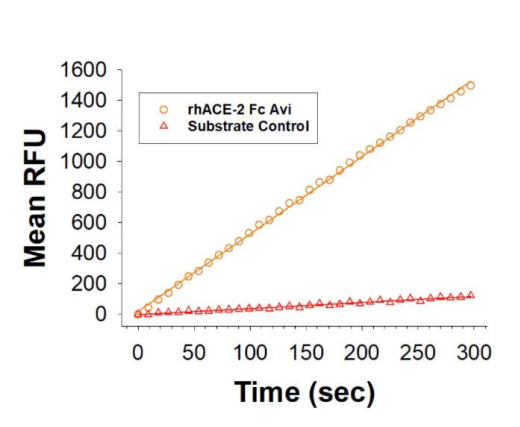
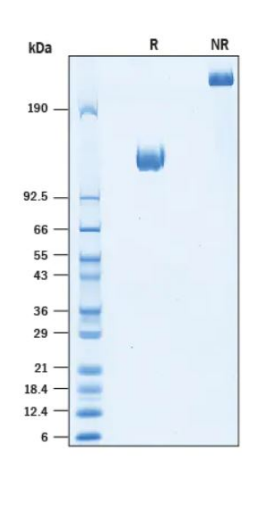
	promotes dimerization and association with amino acid transporters (2). The peptidase domain contains a long deep cleft that undergoes a large hinge-bending movement at substrate and inhibitor binding (12). Classical ACE inhibitors such as captopril and lisinopril do not inhibit ACE-2 activity and inhibitors of ACE-2 do not inhibit ACE activity (13).
Predicted N Terminal	Protein identity confirmed by mass spectrometry.
Form	Supplied as a 0.2 μm filtered solution in Tris, NaCl, ZnCl2 and Glycerol.
Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant SARS-CoV-2 Spike RBD Fc Chimera is immobilized at 0.2 g/mL (100 μ/well), Biotinylated Recombinant Human ACE2 Fc Chimera Avi-tag binds with an ED50 of 0.6-4.8.
Molecular Mass	118-130 kDa, under reducing conditions
Endotoxin	<1.0 EU per 1 μg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	Bioactivity, Enzyme Activity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.6 months from date of receipt, -20 to -70 °C as supplied.3 months, -20 to -70 °C under sterile conditions after opening.
Conjugation	Biotin

GENE INFORMATION

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Gene Name	ACE2 angiotensin I converting enzyme (peptidyl-dipeptidase A) 2 [Homo sapiens]
Official Symbol	ACE2
Synonyms	ACE2; angiotensin I converting enzyme (peptidyl-dipeptidase A) 2; angiotensin-converting enzyme 2; metalloprotease MPROT15; ACE-related carboxypeptidase; angiotensin I converting enzyme 2; angiotensin-converting enzyme homolog; ACEH;
Gene ID	59272
mRNA Refseq	NM_021804
Protein Refseq	NP_068576
MIM	300335
UniProt ID	Q9BYF1
Binding Activity	

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Enzyme Activity	 Biotinylated Recombinant Human ACE2 Fc Chimera Avi-tag(CHO Expressed) is measured by its ability to cleave a fluorogenic peptide substrate, Mca-YVADAPK(Dnp)-OH.
SDS-PAGE	 2 μg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

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