



LD Biopharma, Inc.
7384 Trade Street, Suite B
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- PRODUCT DATA SHEET -

Name of Product: Recombinant YFP - Human ACE2 Fusion Protein
Catalog Number: HRP-3053
Manufacturer: LD Biopharma, Inc. USA

Introduction

The protein encoded by human angiotensin-converting enzyme 2 (ACE2) gene belongs to the angiotensin-converting enzyme family of dipeptidyl carboxydipeptidases and has considerable homology to human angiotensin 1 converting enzyme. This secreted protein catalyzes the cleavage of angiotensin I into angiotensin 1-9, and angiotensin II into the vasodilator angiotensin 1-7. The organ- and cell-specific expression of this gene suggests that it may play a role in the regulation of cardiovascular and renal function, as well as fertility. In addition, the ACE2 protein is a functional receptor for the spike glycoprotein of the human coronavirus HCoV-NL63 and the human severe acute respiratory syndrome coronaviruses, SARS-CoV and SARS-CoV-2 (COVID-19 virus).

Full-length extracellular domain of human ACE2 cDNA (18 - 740aa, derived from BC039902) was constructed with codon optimization gene synthesis and expressed with YFP Protein as N-terminal (YFP: 256aa) fusion protein in *E.coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: ACE2 (ACEH ; UNQ868)
Accession Number: NP_068576
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT and others.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

Key References



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Lu R, et al., *Genomic characterization and epidemiology of 2019 novel coronavirus: implication for virus origins and receptor binding.* Lancet. Feb 22: 395(10224): 565-574. (2020)

Zhang Q, et al., *ACE2 inhibits breast cancer angiogenesis via suppressing the VEGFa/VEGFR2/ERK pathway.* J. Exp. Clin. Cancer Res. 38 (1), 173 (2019)

Xu X, et al., *RhoA-Rho associated kinase signaling leads to renin-angiotensin system imbalance and angiotensin converting enzyme 2 has a protective role in acute pulmonary embolism.* Thromb. Res. 176, 85-94 (2019)

Crackower MA, et al. *Angiotensin-converting enzyme 2 is an essential regulator of heart function.* Nature 417 (6891), 822-828 (2002)

Applications

1. May be used for ACE2 protein-protein interaction assay, such as COVID spike protein and ACE2 binding assay.
2. As native human ACE2 immunogen for its specific antibody production.

Quality Control

Purity: > 90 % by SDS-PAGE.

Recombinant **YFP**- Human ACE2 Fusion Protein Sequence: (121.5 kD)

MKHHHHHHQVSKGEELFTGVVPILEVELDGDVNGHKFSVSGEGEGDATYGKLTLLKLLCTTGKLPV
PWPTLVTTLGYGVCFFARYPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTL
VNRIELKGI DFKEDGNILGHKLEYNYNSHNVYITADKQKNGIKANFKIRHNI EDGGVQLADHYQ
QNTPIGDGPVLLPDNHLYSYQSALFKDPNEKRDHMLLEFLTAAGITEGMNDLYKGSENLYFQG
EFSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQNMN
NAGDKWSAFLKEQSTLAQMYPLQEIQNLTVVKLQLQALQQNGSSVLSSEDKSKRLNTILNTMSTIY
STGKVCNPNPQECLELLEPGLNEIMANSLDYNERLWAWESWRSEVVGKQLRPLYEEYVVLKNEMA
RANHVEDYGDYWRGDYEVNGVDGYDYSRGLIEDVEHTFEEIKPLYEHLHAYVRAKLMNAYPSY
ISPIGCLPAHLLGDMWGRFWTNLYSLTVPFQKPNIDVTDAMVDQAWDAQRI FKEAEKFFVSVG
LPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGFRI LMCCTKVTMDDFLTAHHEMGIHQYDM
AYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSI GLLSPDFQEDNETEINFLKQALTIV
GTL PFTYMLEKWRWVFKGEIPKDQWMKKWWEKREIVGVVEPVPHDETYCDPASLFHVSNDYS



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FIRYYTRTLYQFQFQEALCQAAKHEGPLHKCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVG
AKNMNVRPLLNYFEPLFTWLKDQNKNSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNENE
MYLFRSSVAYAMRQYFLKVKNQMILFGCEEDVRVANLKPRI SFNFFVTAPKNVSDI IPRTEVEKA
IRMSRSRINDAFRLNDNSLEFLGIQPTLGPPNQPPVSIWLVIVFGVVMGVIVVGVIVILIFTGIRD
RKKKNKARSGENPYASIDISKGENNPQGFQNTDDVQTSF