



LD Biopharma, Inc.  
7384 Trade Street, Suite B  
San Diego, CA 92121  
Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human CD143 Protein  
**Catalog Number:** HRP-3158  
**Manufacturer:** LD Biopharma, Inc. USA

### Introduction

Human Angiotensin-Converting Enzyme ACE (also named as CD143) gene encodes a enzymatic trans-membrane protein which converts angiotensin I to angiotensin II by release of the terminal His-Leu, this results in an increase of the vasoconstrictor activity of angiotensin. It also able to inactivate bradykinin, a potent vasodilator. CD143 has also a glycosidase activity which releases GPI-anchored proteins from the membrane as soluble one by cleaving the mannose linkage in the GPI moiety. At least 4 isoforms of CD143 have been identified.

Full-length extracellular domain of human CD143 cDNA (22 – 656aa, Isoform-III, derived from BC036375, as testis-specific isoform) was constructed with codon optimization gene synthesis and expressed with a human N-terminal ***T7-His- and 2 TEV*** cleavage site Tag (37aa) fusion. This protein was expressed 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:** CD143 (ACE; DCP; DCP1)  
**Accession Number:** NP\_690043  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

### Key References

Ghafouri-Fard S, et al., ***Angiotensin converting enzyme: A review on expression profile and its association with human disorders with special focus on SARS-CoV-2 infection.*** Vascul. Pharmacol. 130, 106680 (2020)



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Danilov SM, *Tissue ACE phenotyping in lung cancer*. PLoS ONE 14 (12), e0226553 (2019)

Cambien F, et al., *Deletion polymorphism in the gene for angiotensin-converting enzyme is a potent risk factor for myocardial infarction*. Nature 359 (6396), 641-644 (1992)

## Applications

1. May be used for in vitro CD143 mediated endothelial cell activities regulation study with this recombinant protein either as soluble factor or as coating matrix protein.
2. May be used for CD143 protein-protein interaction assay.
3. Potential diagnostic protein, which may be used as biomarker for various endothelial cell functional index, such as monitoring failing heart.
4. As native human CD143 immunogen for its specific antibody production.

## Quality Control

Purity: > 85 % by SDS-PAGE.

## Recombinant Human CD143 Protein Sequence ( 77.0 kD )

MASMTGGQQMGRGHHHHHENLYFQGGFGSENLYFQGHPLLVPSEASQQVTVTHGTSSQATTSSQTTT  
HQATAHQTSAQSPNLVTDEAEASKFVEEYDRTSQVVWNEYAEANWNYNTNITTTETSKILLQKNMQIANHT  
LKYGTQARKFDVNQLQNTTIKRI IKKVQDLERAALPAQELEEYNKILLDMETTYSVATVCHPNGSCLQLE  
PDLTNVMATSRKYEDLLWAWEGWRDKAGRAILQFYPKYVELINQAARLNGYVDAGDSWRSMYETPSLEQD  
LERLFQELQPLYLNLHAYVRRALHRHYGAQHINLEGPI PAHLLGNMWAQTWSNIYDLVVPFSPAPSMDTT  
EAMLKQGWT PRRMFKEADDFFTSLGLLPVPPEFWNKSMLEKPTDGREVVCHASAWDFYNGKDFRIKQCTT  
VNLEDLVVAHHEMGGHIQYFMQYKDL PVALREGANPGFHEAIGDVLALSVSTPKHLHSLNLLSSEGGSEDEH  
DINFLMKMALDKIAFI PFSYLVDQWRWRVFDGSI TKENYNQEWWSLRLKYQGLCPPVPRTQGD FDPGAKF  
HIPSSVPYIRYFVVSFI IQFQFHEALCQAAGHTGPLHKCDIYQSKEAGQRLATAMKLGFSRPWPEAMQLIT  
GQPNMSASAMLSYFKPLLDWLR TENELHGEKLGWPQYNWTPNS