

Human ACE2 / Angiotensin-Converting Enzyme 2 Protein (Fc Tag)

Catalog Number: 10108-H02H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

ACE2, ACEH, DKFZp434A014

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Ser 740) of human ACE2 precursor (NP_068576.1) was expressed with the fused Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

1. Using the Octet RED System, the affinity constant (Kd) of human AEC2-Fc (Cat: 10108-H02H) bound to Spike (HCoV-EMC/2012) (Cat: 40071-V31B) was 6 nM.
2. Using the Octet RED System, the affinity constant (Kd) of human AEC2-Fc (Cat: 10108-H02H) bound to Spike (HCoV-EMC/2012) (Cat: 40071-V05B) was 30 nM.
3. Using the Octet RED System, the affinity constant (Kd) of human AEC2-Fc (Cat: 10108-H02H) bound to Spike (HCoV-EMC/2012) (ECD, aa 1-1297) (Cat: 40069-V08B) was 30 nM.
4. Using the Octet RED System, the affinity constant (Kd) of human AEC2-Fc (Cat: 10108-H02H) bound to Spike-His (aa 1-760) (Cat: 40021-V08H) was 10 nM.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gln 38

Molecular Mass:

The recombinant human ACE2/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 961 amino acids and predicts a molecular mass of 110.3 kDa. As a result of glycosylation, the rhACE2/Fc monomer migrates as approximately 145-150 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, pH 7.5

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

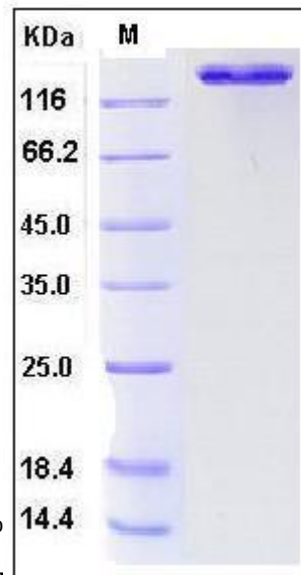
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution

the products.

Protein Description

Angiotensin-converting enzyme 2 (ACE2), also known as ACEH (ACE homolog), is an integral membrane protein with considerable homology to ACE. ACE2 is identified as a zinc metalloprotease structurally consisting of a N-terminal signal peptide, a single catalytic domain, a C-terminal membrane anchor, and a short cytoplasmic tail. ACE2 hydrolyzes Ang I and Ang II into inactive Ang (1-9) to Ang (1-7) respectively via its carboxypeptidase activity. A critical characteristic of ACE2 is that its enzymatic activity is not affected by classical ACE inhibitors. ACE2 is organ- and cell-specific expressed, predominantly in vascular endothelial cells in the heart and kidneys, and accordingly plays an essential regulating role in the heart and renal function, as well as fertility. Furthermore, ACE2 also functions as a receptor for spike glycoprotein of the human coronaviruses SARS and HCoV-NL63.

References

1. Donoghue, M. et al., 2000, Circ. Res. 87: E1-E9.
2. Carey, R.M. et al., 2004, Hypertension. 43: 943-944.
3. Crackower, M. A. et al., 2002, Nature. 417: 822-828.
4. Tipnis, S.R. et al., 2000, J. Biol. Chem. 275: 33238-33243.
5. Oudit, G.Y. et al., 2003, Trends Cardiovasc. Med. 13: 93-101.
6. Wang, S. et al., 2008, Virus. Res. 136: 8-15.

Manufactured By Sino Biological Inc., FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>