

## Active Recombinant Human ACE2 Protein, Fc-tagged

**Cat. No.** ACE2-601H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human angiotensin-converting enzyme 2 (ACE2) extracellular domain (18-615) was expressed in CHO cells using a C-terminal Fc tag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Source</b>           | CHO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ProteinLength</b>    | 18-615                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Description</b>      | <p>The protein encoded by this 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. ACE2 is known to be expressed in various human organs, and its organ- and cell-specific expression suggests that it may play a role in the regulation of cardiovascular and renal function, as well as fertility. In addition, the encoded 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, the latter is the causative agent of coronavirus disease-2019 (COVID-19). Multiple splice variants have been found for this gene and the dACE2 (or MIRb-ACE2) splice variant has been found to be interferon inducible.</p> |
| <b>Bio-activity</b>     | Measured by its binding ability in a functional ELISA. Immobilized 2019-nCoV spike protein RBD (His tag) at 2µg/mL (100 µL/well) can bind to human ACE2 (19-740)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|                       |                                                                                                                                                                                                                                                       |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | protein (Fc tag).                                                                                                                                                                                                                                     |
| <b>Molecular Mass</b> | ~150 kDa                                                                                                                                                                                                                                              |
| <b>Purity</b>         | >95 %                                                                                                                                                                                                                                                 |
| <b>Stability</b>      | One year at -70 centigrade from date of shipment.                                                                                                                                                                                                     |
| <b>Storage</b>        | Store product at –70 centigrade. For optimal storage, aliquot targets into smaller quantities after centrifugation and store at the recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. |
| <b>Concentration</b>  | 0.2 µg/µL                                                                                                                                                                                                                                             |
| <b>Storage Buffer</b> | Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 90mM glycine.                                                                                                                                                                                    |
| <b>Shipping</b>       | On dry ice.                                                                                                                                                                                                                                           |

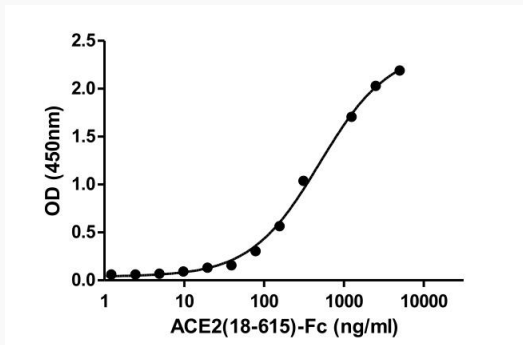
## GENE INFORMATION

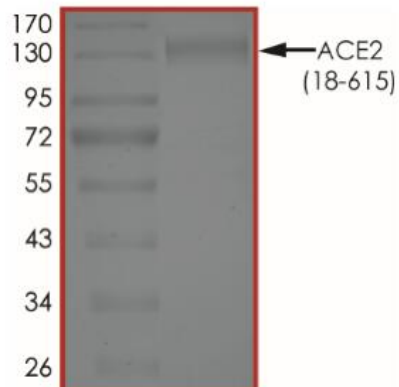
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | ACE2 angiotensin converting enzyme 2 [ Homo sapiens (human) ]                                                                                                                                                                                                                                                                                                                                                      |
| <b>Official Symbol</b> | ACE2                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Synonyms</b>        | ACE2; angiotensin converting enzyme 2; ACEH; angiotensin-converting enzyme 2; ACE-related carboxypeptidase; angiotensin I converting enzyme (peptidyl-dipeptidase A) 2; angiotensin I converting enzyme 2; angiotensin-converting enzyme homolog; angiotensin-converting enzyme-related carboxypeptidase; metalloprotease MPROT15; peptidyl-dipeptidase A; truncated angiotensin converting enzyme 2; EC 3.4.17.23 |

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| Gene ID                 | 59272                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                         |            |   |      |    |      |     |      |      |      |       |      |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------|---|------|----|------|-----|------|------|------|-------|------|
| mRNA Refseq             | NM_021804                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |            |   |      |    |      |     |      |      |      |       |      |
| Protein Refseq          | NP_068576                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |            |   |      |    |      |     |      |      |      |       |      |
| MIM                     | 300335                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                         |            |   |      |    |      |     |      |      |      |       |      |
| UniProt ID              | Q9BYF1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                         |            |   |      |    |      |     |      |      |      |       |      |
| Activity                | <div data-bbox="711 779 1230 1121" data-label="Figure">  <table border="1"> <caption>Approximate data points from the binding curve</caption> <thead> <tr> <th>ACE2(18-615)-Fc (ng/ml)</th> <th>OD (450nm)</th> </tr> </thead> <tbody> <tr><td>1</td><td>0.05</td></tr> <tr><td>10</td><td>0.10</td></tr> <tr><td>100</td><td>0.50</td></tr> <tr><td>1000</td><td>1.70</td></tr> <tr><td>10000</td><td>2.20</td></tr> </tbody> </table> </div> <p>Measured by its binding ability in a functional ELISA. Immobilized 2019-nCoV spike protein RBD (His tag) at 2µg/mL (100 µL/well) can bind to human ACE2 (19-740) protein (Fc tag).</p> | ACE2(18-615)-Fc (ng/ml) | OD (450nm) | 1 | 0.05 | 10 | 0.10 | 100 | 0.50 | 1000 | 1.70 | 10000 | 2.20 |
| ACE2(18-615)-Fc (ng/ml) | OD (450nm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                         |            |   |      |    |      |     |      |      |      |       |      |
| 1                       | 0.05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                         |            |   |      |    |      |     |      |      |      |       |      |
| 10                      | 0.10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                         |            |   |      |    |      |     |      |      |      |       |      |
| 100                     | 0.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                         |            |   |      |    |      |     |      |      |      |       |      |
| 1000                    | 1.70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                         |            |   |      |    |      |     |      |      |      |       |      |
| 10000                   | 2.20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                         |            |   |      |    |      |     |      |      |      |       |      |

**Purity**

The purity of ACE2 was determined to be >95% by densitometry, approx. MW ~130 kDa.

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