



Catalog #

Aliquot Size

A51C2-71C-1000

1000  $\mu$ l

## Human ACE2 Stable Cell line-CHO

Stable Recombinant CHO cells

Catalog # A51C2-71C

Lot # S3403-3

### Product Description

CHO cell line stably overexpressing native human angiotensin-converting enzyme 2 (ACE2) extracellular domain. The gene accession number is [NM\\_021804](#).

### Applications

FACS analysis, cell-based ACE2 assays.

### Formulation

Each vial contains  $1 \times 10^6$  cells in 1 ml of FBS containing 8 % DMSO.

### Culture Medium

DMEM + 5% FBS for adherent culture / HyClone HyCell for suspension culture.

### Mycoplasma Testing

The test results indicate the absence of mycoplasma.

### Viability

Cells recover as healthy logarithmically growing cells within 3 to 4 days post thawing. Viability measured to be  $\geq 90\%$ .

### Scientific Background

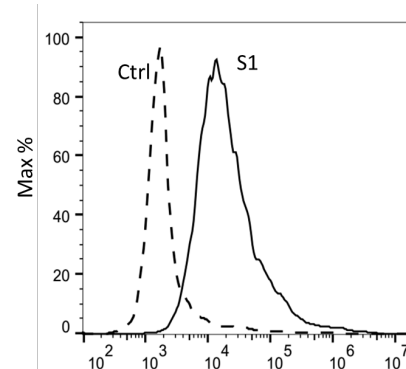
The angiotensin converting enzyme 2 (ACE2) belongs to the angiotensin-converting enzyme family of dipeptidyl carboxydipeptidases. ACE2 cleaves the angiotensin I and angiotensin II to counterbalancing ACE activity in the regulation of renin angiotensin system (RAS). ACE2 also has the role in regulation of cardiovascular, renal and reproductive systems physiologically (1). In addition, ACE2 is a functional receptor for the spike glycoprotein (S) of SARS-CoV, HCoV-NL63, and SARS-CoV-2 (2), which causes the pandemic of the respiratory diseases (COVID-19) (3).

### References

1. Imai Y, et al: Angiotensin-converting enzyme 2 (ACE2) in disease pathogenesis. *Circ J*. 2007, 74(3):405-10.
2. Lan J, et al: Crystal structure of the 2019-nCoV spike receptor-binding domain bound with the ACE2 receptor. *bioRxiv*. doi: <https://doi.org/10.1101/2020.02.19.956235>
3. Zhou P, et al: A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature*. 2020, 579:270-89.

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### Activity



2019-nCoV Spike protein S1

FACS assay showed 2019-nCoV Spike protein S1 can bind to ACE2 overexpressing cells. ACE2 overexpressing cells were stained with 2019-nCoV Spike protein S1, followed by anti-spike protein antibody (C19S1-61H) and fluorescence-conjugated secondary antibody.

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Vial Contents

1X10<sup>6</sup> cells/ml

Subculture routine

Subculture the cells every two to three days

Stability

1yr stored below -130°C from date of shipment

Storage &amp; Shipping

For optimal storage, store product in liquid nitrogen vapor until ready to use. Product shipped on dry ice.

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# SAFETY DATA SHEET

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## Article 1 – Product Identification

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**Product Name: Human ACE2 Stable Cell line-CHO****Catalog # A51C2-71C**

*This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, agricultural, nor pesticidal applications.*

Manufacturer's Name: SignalChem Biotech Inc.  
Street Address: 110-13120 Vanier Place  
City, Prov. Postal Code: Richmond, BC, V6V 2J2  
Fax: 604-232-4601  
EMERGENCY PHONE: 604-232-4600

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## Article 2 - Hazard Identification

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- **WHMIS Classification:** Not WHMIS controlled
  - **GHS classification:** Not a hazardous substance or mixture according to the Globally Harmonized System
  - **Hazard Pictograms:** None
  - **Signal words:** None
  - **Hazard statements:** None
  - **Precautionary statements:** None
  - **Other hazards:** None known
  - **Health hazards:** Handle as a potentially biohazardous material under at least Biosafety Level 1 containment. NOT screened for Hepatitis B, human immunodeficiency viruses or other adventitious agents, unless reported on the datasheet.
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## Article 3 – Composition/Information on Ingredients

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- **Chemical Characterization:** Mixtures.
  - **Description:**  
**Various Animal Cell Cultures at Biosafety Level 1**  
Either frozen or growing cells shipped in Fetal bovine serum which may also contain culture media (a mixture of components that may include, but is not limited to: inorganic salts, vitamins, amino acids, carbohydrates and other nutrients dissolved in water). Frozen Cultures may also contain a 5%-10% solution of Dimethyl sulfoxide as a cryoprotectant.
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## Article 4 – First-aid Measures

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- **General information:** Consult a physician by providing the SDS.
  - **After inhalation:** Breathe in fresh air. If cannot breath, give artificial respiration and consult a physician.
  - **After skin contact:** Immediately wash with soap and plenty of water and rinse thoroughly. Consult a physician.
  - **After eye contact:** Rinse opened eyes with plenty of water for at least 15 minutes. Consult a physician.
  - **After swallowing:** Rinse the mouth with plenty of water and consult a physician.
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## Article 5 - Fire-fighting Measures

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- **Suitable extinguishing media:** Use water spray, extinguishing powder, carbon dioxide, or other appropriate measure that is suitable to the environment.
  - **Specific hazards arising from the substance or mixture:** None known.
  - **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.
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## Article 6 – Accidental Release Measures

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- **Personal precautions, protective equipment and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
  - **Environmental precautions:** Do not allow to enter drains.
  - **Methods and materials for containment and cleaning up:**  
**Patient/Victim:** Wash with soap and water. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Do not take clothing home  
**Equipment/Environment:** Allow aerosols to settle; wearing protective clothing, gently cover spill with paper towel and apply 1% sodium hypochlorite, starting at perimeter and working towards the center; allow sufficient contact time before clean-up (30 min).  
**Note:** The use of additional PPE may be necessary for cleaning solutions.
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# SAFETY DATA SHEET

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## Article 7 - Handling and Storage

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- **Precautions for safe handling:** Follow established laboratory procedures when handling material in addition to the instructions on product information sheet and label.
- **Conditions for safe storage:** Store according to instructions on product information sheet and label.

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## Article 8 - Exposure Controls/Personal Protection

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- **Components with limit monitoring values at workplace:** None
- **Appropriate engineering controls:**  
Apply adequate ventilation including mechanical exhaust or laboratory fume hood. Follow standard laboratory practices.
- **Individual protection measures:**  
**Respiratory protection:** Use appropriate respirator if there is inadequate ventilation by following the government standards.  
**Hand protection:** Wear gloves and use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.  
**Eye/face protection:** Safety goggles with side-shields approved under appropriate government standards.  
**Skin/body protection:** Use appropriate clothing, footwear and any additional protection measures to protect from splashing or contamination.

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## Article 9 – Physical and Chemical Properties

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- **Physical State:** frozen or freeze dried.

No Information is available for PH, Vapor Pressure, Vapor Density, Evaporation Rate, Viscosity, Boiling Point, Freezing/Melting Point, Decomposition Temperature, Solubility, Specific Gravity/Density, or Molecular Weight

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## Article 10 - Stability and Reactivity

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- **Reactivity:** Stable under recommended transport and storage conditions.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No information available.
- **Incompatible materials:** No information available.
- **Hazardous decomposition products:** Will not occur.

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## Article 11 - Toxicological Information

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- **Acute toxicity:** Not available.
- **LD/LC50:** Not available.
- **Skin corrosion/irritation:** Not available.
- **Serious eye damage/eye irritation:** Not available.
- **Respiratory or skin sensitization:** Not available.
- **Germ cell mutagenicity:** Not available.
- **Carcinogenicity:** No components are listed in IARC, or NTP, or OSHA, or ACGIH.
- **Reproductive toxicity:** Not available.
- **Teratogenicity:** Not available.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Not available.
- **Potential health effects:** The toxicological properties of this substance have not been fully investigated.

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## Article 12 - Ecological Information

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- **Eco-toxicity:** Not applicable.
- **Biodegradability:** Not applicable.
- **Bio-accumulative potential:** Not applicable.
- **Mobility in soil:** Not applicable.
- **PBT and vPvB assessment:** Not applicable.
- **Other adverse effects:** Not applicable.

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## Article 13 - Disposal Considerations

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- **Disposal methods:** In accordance to applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Disposal should be made in accordance to official regulations. Use water or cleansing agents to clean the area.

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## Article 14 - Transport Information

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- **DOT:** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.

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## Article 15 - Regulatory Information

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- **WHMIS Classification:** Non-hazardous.
- **GHS label elements:** Not applicable.
- **Signal word:** Not applicable.
- **Hazard statements:** Not applicable.

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## Article 16 - Other Information

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The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SignalChem shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalog for additional terms and conditions of sale.

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