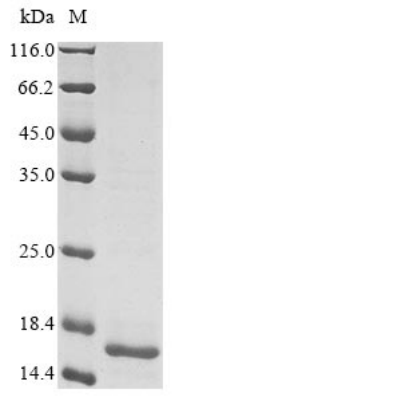
Recombinant Human coronavirus 229E Spike glycoprotein (S), partial

Product Code	CSB-EP321366HIT
Abbreviation	Recombinant Human coronavirus 229E S protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P15423
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Protein
Immunogen Species	Human coronavirus 229E (HCoV-229E)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	DVLQENQKILAASFNKAMTNIVDAFTGVNDAITQTSQALQTVATALNKIQDVVN QQGNSLNHLTSQLRQNFQAISSSIQAIYDRLDTIQ
Research Area	Microbiology
Source	E.coli
Target Names	S
Expression Region	785-873aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	17.2 kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Human coronavirus 229E Spike glycoprotein (S) is produced in E. coli and covers amino acids 785 to 873. The protein includes an N-terminal 10xHis-tag and a C-terminal Myc-tag, which makes purification and detection more straightforward. SDS-PAGE analysis confirms the purity level exceeds 85%, which should provide reliable results for research work.

The Spike glycoprotein (S) of Human coronavirus 229E appears to play a critical role in how the virus enters cells - it seems to handle both attachment to host cell receptors and the membrane fusion process. This protein has become a key target for researchers looking into viral infection mechanisms and possible therapeutic approaches. Understanding this protein may be crucial for grasping how coronaviruses interact with their hosts and for developing strategies against coronavirus-related diseases.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Antibody Development and Epitope Mapping

This recombinant spike protein fragment (785-873aa) could work as an immunogen for creating antibodies that specifically target this region of the HCoV-229E spike protein. The His and Myc tags make purification and detection during antibody screening much easier. Researchers might use this protein to develop monoclonal or polyclonal antibodies that recognize either linear or conformational epitopes within this particular domain. The antibodies that result could prove valuable for studying HCoV-229E spike protein expression, where it shows up in cells, and how it functions across different experimental setups.

2. Protein-Protein Interaction Studies

The His-tagged protein can be attached to nickel-affinity matrices for pull-down assays. This setup may help identify cellular proteins that interact with this

specific region of the HCoV-229E spike protein. Meanwhile, the Myc tag offers another way to detect the protein during Western blot analysis and immunoprecipitation experiments. Researchers can look for potential binding partners from cell lysates or test whether specific candidate proteins directly interact with this spike protein domain. These experiments might reveal insights into the molecular mechanisms behind HCoV-229E infection or how cells respond to it.

3. ELISA-Based Binding Assays

The dual-tagged recombinant protein works well for enzyme-linked immunosorbent assays that study binding interactions with different ligands, receptors, or other proteins. The His tag allows for oriented attachment on nickel-coated plates. The Myc tag enables detection through anti-Myc antibodies. Researchers can use this approach to screen for small molecule inhibitors, measure receptor binding affinities, or examine how mutations affect protein interactions. The high purity (>85%) likely ensures consistent and reproducible assay results.

4. Structural and Biochemical Characterization

This recombinant protein fragment provides material for biophysical studies that examine the structural properties of the 785-873aa region in HCoV-229E spike protein. Researchers might perform circular dichroism spectroscopy, dynamic light scattering, or analytical ultracentrifugation to assess protein folding, stability, and whether it forms complexes with itself. The specific expression region allows for focused analysis of this domain's biochemical properties. Studies like these contribute to understanding how structure relates to function within the broader coronavirus spike protein architecture.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.