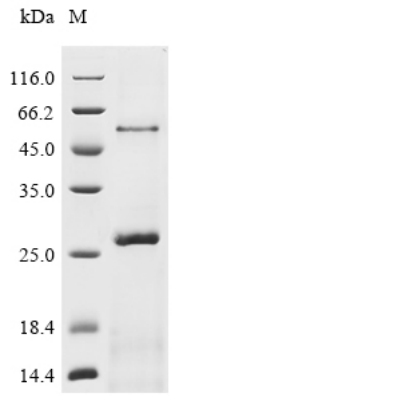
Recombinant Bat coronavirus HKU3 Spike glycoprotein (S), partial

Product Code	CSB-EP663395BFD
Abbreviation	Recombinant Bat coronavirus HKU3 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.	Q3LZX1
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	Bat coronavirus HKU3 (BtCoV) (SARS-like coronavirus HKU3)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	RVSPTQEVIRFPNITNRCPFDKVFNATRFPNVYAWERTKISDCVADYTVLYNST SFSTFKCYGVSPSKLIDLCFTSVYADTFLIRSSEVRQVAPGETGVIADYNYKLPD DFTGCVIAWNTAKHDTGNYYYRSHRKTKLKPFERDLSSDDGNGVYTLSTYDF NPNVPVAYQATRVVVLSFELLNAPATVCGPKLSTELVKNQCVNF
Research Area	Microbiology
Source	E.coli
Target Names	S
Expression Region	310-514aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	25.9 kDa
Protein Length	Partial
Image	



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

Description

Recombinant Bat coronavirus HKU3 Spike glycoprotein (S) is produced in E. coli and covers amino acids 310-514. This partial protein carries an N-terminal 6xHis-tag, which streamlines purification and detection processes. SDS-PAGE analysis confirms the product achieves greater than 90% purity, making it well-suited for research work.

The Spike glycoprotein (S) of Bat coronavirus HKU3 appears to play a critical role in how the virus enters cells. It mediates both attachment and fusion between viral and host cell membranes. This makes it a key target for investigating viral infection mechanisms and potentially developing therapeutic interventions. Research into coronavirus-host interactions and viral pathogenesis likely depends on understanding this protein.

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. Comparative Spike Protein Structure-Function Studies

This recombinant fragment (amino acids 310-514) from bat coronavirus HKU3 spike protein may serve as a valuable tool for comparing structural and functional properties with other coronavirus spike proteins. The N-terminal His-tag allows for straightforward purification and immobilization in biophysical characterization techniques such as surface plasmon resonance, circular dichroism spectroscopy, or X-ray crystallography. Researchers can explore evolutionary relationships and structural conservation patterns between bat coronavirus HKU3 and other SARS-related coronaviruses by examining this domain alongside corresponding regions from different species.

2. Antibody Development and Cross-Reactivity Screening

The high purity (>90%) His-tagged protein fragment works as an immunogen or screening antigen for developing research antibodies specific to bat coronavirus HKU3 spike protein. This recombinant fragment enables systematic evaluation

of antibody cross-reactivity patterns between different coronavirus species through ELISA-based assays or Western blot analysis. Such applications prove particularly valuable for understanding antigenic relationships and creating research tools for coronavirus surveillance studies.

3. Protein-Protein Interaction Studies

Pull-down assays can make use of the His-tagged spike protein fragment to identify and characterize potential binding partners or host cell receptors that interact with this specific region of the bat coronavirus HKU3 spike protein. The N-terminal His-tag allows immobilization on nickel-affinity matrices for systematic screening of protein libraries or cell lysates. Studies like these may provide insights into the molecular mechanisms behind viral entry and host range determination.

4. Biochemical Characterization and Stability Studies

This purified recombinant fragment provides suitable material for detailed biochemical characterization. This includes thermal stability analysis, pH sensitivity testing, and proteolytic susceptibility studies. The defined amino acid boundaries (310-514) and high purity make it appropriate for quantitative biochemical assays that determine protein stability parameters and optimal storage conditions. Such studies contribute to fundamental understanding of coronavirus spike protein biochemical properties and inform future research applications.

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.