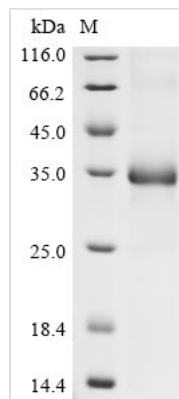




Recombinant Human coronavirus HKU1 Spike glycoprotein (S), partial

Product Code	CSB-EP618924HIV
Abbreviation	Recombinant Human coronavirus HKU1 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.	Q14EB0
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 HKU1 (isolate N2) (HCoV-HKU1)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	TVKPVATVYRRIPNLPDCDIDNWLNNVSVPSPLNWERRIFSNCNFNLSLLRLV HVDSFSCNNLDKSKIFGSCFNSITVDKFAIPNRRRDDLQLGSSGFLQSSNYKIDI SSSSCQLYYSLPLVNVNTINNFNPSSWNRRYGFSGFNVSSYDVVYSDHCFSVN SDFCPCADPSVVNSCVKSKPLSAICPAGTKYRHCDLDTTLYVNNWCRCSCLP DPISTYSPNTCPQKKVVVGIGEHCPLGINEEKCQTQLNHSSCSCSPDAFLGW SFDSCISNNRCNIFSNFIFNGINS GTTCSNDLLYSNTEVSTGVCVNY
Research Area	Microbiology
Source	E.coli
Target Names	S
Expression Region	310-622aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal 6xHis-tagged
Mol. Weight	35.7 kDa
Protein Length	Partial
Image	



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

Description

Recombinant Human coronavirus HKU1 Spike glycoprotein (S) is produced in *E. coli* and consists of a partial length from amino acids 310 to 622. The protein includes a C-terminal 6xHis-tag for ease of purification and detection. Purity reaches greater than 90% as determined by SDS-PAGE, which appears to make it suitable for various research applications. This product is intended for research use only, with no endotoxin level specified.

The Spike glycoprotein (S) of Human coronavirus HKU1 seems integral to the virus's ability to attach and enter host cells. It likely plays a crucial role in viral entry through interactions with host cell receptors, making it a key focus in studies of viral infection mechanisms and immune response. Understanding its structure and function may be essential for developing therapeutic strategies and vaccines against coronaviruses.

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. Antigen for Antibody Development and Characterization

This recombinant spike protein fragment (amino acids 310-622) can serve as an antigen for generating monoclonal or polyclonal antibodies specific to Human coronavirus HKU1. The C-terminal His-tag streamlines purification and immobilization for immunization protocols or screening assays. Researchers might use this protein to develop antibodies that recognize specific epitopes within this region of the HKU1 spike protein. High purity (>90%) suggests consistent immunogenic presentation for antibody production workflows.

2. Protein-Protein Interaction Studies

Pull-down assays could benefit from this His-tagged spike protein fragment to identify and characterize potential cellular receptors or binding partners for Human coronavirus HKU1. The C-terminal His-tag allows for immobilization on nickel-based affinity matrices. This enables researchers to capture interacting



proteins from cell lysates or purified protein libraries. Such an approach may help elucidate the molecular mechanisms of HKU1 cellular entry and tropism within the amino acid region 310-622.

3. Structural and Biochemical Characterization

This purified spike protein fragment provides material for biophysical and structural studies to understand the molecular properties of the HKU1 spike protein. Techniques such as circular dichroism spectroscopy, dynamic light scattering, or analytical ultracentrifugation might be performed to characterize protein folding, stability, and oligomerization states. The defined amino acid boundaries (310-622) appear to make this fragment suitable for domain-specific structural analysis and comparison with other coronavirus spike proteins.

4. ELISA-Based Binding and Competition Assays

Immobilization of the His-tagged protein in ELISA plates allows for quantitative binding studies and competitive inhibition assays. This system could be used to screen small molecules, peptides, or other proteins for their ability to interact with this specific region of the HKU1 spike protein. High purity and consistent tag orientation likely support reproducible coating and detection in plate-based assay formats for medium-throughput screening 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.