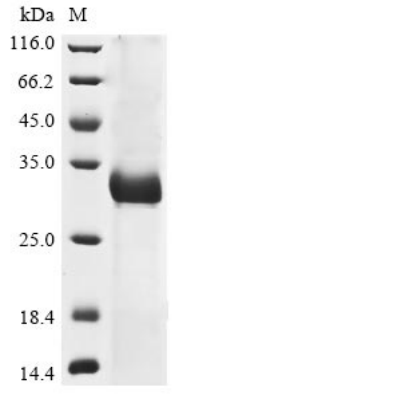
Recombinant Human coronavirus OC43 Spike glycoprotein (S), partial

Product Code	CSB-EP336163HIY1
Abbreviation	Recombinant Human coronavirus OC43 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.	P36334
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 OC43 (HCoV-OC43)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	TVQPIADVYRRKPNLPNCNIEAWLNDKSVPSPLNWERKTFSNCNFNMSSLMS FIQADSFTCNNIDAAKIYGMCFSSITIDKFAIPNGRKVDLQLGNLGYLQSFNYRID TTATSCQLYYNLPAANVSVSRFNPSTWNKRFGFIEDSVFKPRPAGVLTNHDVV YAQHCFKAPKNFCPCKLNGSCVGSGPGKNNGIGTCPAGTNYLTCDNLCTPDP ITFTGTYKCPQTKSLVGIGEHCSGLAVKSDYCGGNSCTCRPQAFLGWSADSC LQGDKCNIFANFILHDVNSGLTCSTDLQKANTDIILGVCVNY
Research Area	Others
Source	E.coli
Target Names	S
Expression Region	318-624aa
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	34.5 kDa
Protein Length	Partial
Image	



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

Description

Recombinant Human coronavirus OC43 Spike glycoprotein (S) is produced in E. coli and spans the 318-624 amino acid region. This partial construct includes a C-terminal 6xHis-tag, which appears to make purification more straightforward. The protein shows a purity level greater than 85% as determined by SDS-PAGE, making it suitable for various research applications. It is intended for research use only and is not for diagnostic or therapeutic purposes.

The Spike glycoprotein of Human coronavirus OC43 plays a crucial role in viral entry into host cells, enabling attachment and fusion processes. It represents a key target for studying viral pathogenesis and immune response mechanisms. Understanding the structure and function of this protein may be essential in virology research, particularly in the context of coronavirus-related studies.

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 Characterization

This recombinant HCoV-OC43 spike protein fragment can serve as an immunogen for generating monoclonal or polyclonal antibodies specific to the spike glycoprotein. The C-terminal His-tag appears to simplify purification and immobilization for antibody screening assays. Researchers might use this protein in ELISA-based screening to identify and characterize antibodies that recognize the 318-624 amino acid region of the spike protein. The high purity (>85%) likely makes it suitable for immunization protocols and subsequent antibody validation studies.

2. Protein-Protein Interaction Studies

The His-tagged spike protein fragment can be used in pull-down assays to identify potential cellular receptors or binding partners within the specified amino acid region. The tag enables efficient immobilization on nickel-based affinity matrices for capturing interacting proteins from cell lysates or purified protein

libraries. This application could help clarify molecular mechanisms of viral entry or host cell recognition involving this specific domain of the spike protein.

3. Structural and Biochemical Characterization

This purified protein fragment provides material for biophysical studies including circular dichroism spectroscopy, dynamic light scattering, and analytical ultracentrifugation to characterize its folding properties and oligomerization state. The defined amino acid boundaries (318-624) make it suitable for limited proteolysis studies and mass spectrometry analysis to map accessible regions and potential cleavage sites. Such studies may provide insights into the structural properties of this specific spike protein domain.

4. ELISA-Based Binding Assays

The His-tagged protein can be used to develop ELISA platforms for studying binding interactions with potential ligands, small molecules, or other proteins of interest. The tag appears to allow consistent protein orientation and immobilization on ELISA plates through anti-His antibodies or nickel-coated surfaces. This standardized approach enables quantitative binding studies and screening applications to investigate molecular interactions involving this spike protein region.

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.