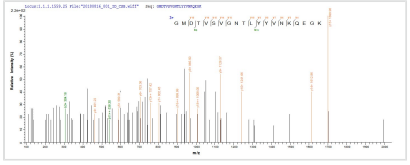
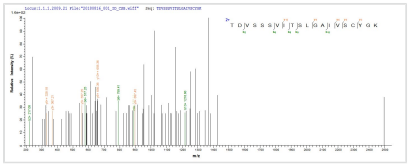
Recombinant Human respiratory syncytial virus A Fusion glycoprotein F0 (F), partial

Product Code	CSB-EP356041HPOa0
Abbreviation	Recombinant Human respiratory syncytial virus A Fusion glycoprotein F0, 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.	P03420
Product Type	Recombinant Protein
Immunogen Species	Human respiratory syncytial virus A (strain A2)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	NITEEFYQSTCSAVSKGYLSALRTGWYTSVITIELSNIKENKCNGTDAKVKLIKQ ELDKYKNAVTELQLLMQSTPPTNNRARRELPRFMNYTLNNAKKTNVTLSKKRK RRFLGFLLGVGSAIASGVAVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVL TSKVLDLKNYIDKQLLPIVNKQSCSISNIETVIEFQQKNNRLLEITREFSVNAGVT TPVSTYMLTNSELLSLINDMPITNDQKKLMSNNVQIVRQQSYSIMSIIKEEVLAY VVQLPLYGVIDTPCWKLHTSPLCTTNTKEGSNICLTRTDRGWYCDNAGSVSFF PQAETCKVQSNRVFCDTMNSLTLPSEINLCNVDIFNPKYDCKIMTSKTDVSSSV ITSLGAIVSCYGKTKCTASNKNRGIIKTFSNGCDYVSNKGMDTVSVGNTLYYVN KQEGKSLYVKGEPIINFYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELLHN VNAGKSTTNIMITT
Research Area	Signal Transduction
Source	E.coli
Target Names	F
Expression Region	27-529aa
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	58.9 kDa
Protein Length	Extracellular Domain
Image	 Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP356041HPOa0 could indicate that this peptide derived from E.coli-expressed Human respiratory syncytial virus A (strain A2) F.



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Description

Recombinant Human respiratory syncytial virus A Fusion glycoprotein F0 is produced in E. coli and contains the extracellular domain from amino acids 27 to 529. The protein carries an N-terminal 6xHis-tag, which helps with purification and detection. SDS-PAGE analysis shows purity levels greater than 85%, making it appropriate for various research applications. Low endotoxin levels are maintained in the final product, which appears important for sensitive experimental work.

The Fusion glycoprotein F0 of Human respiratory syncytial virus A seems to play a central role in how the virus infects cells by mediating membrane fusion and viral entry into host cells. This protein has become a key target for research into viral pathogenesis and vaccine development, since it likely initiates the infection process. Understanding how this protein works may be critical for developing therapeutic interventions and grasping the mechanisms behind viral entry.

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 Studies

This recombinant RSV F0 protein extracellular domain can work as an immunogen for creating monoclonal or polyclonal antibodies against RSV fusion protein. The N-terminal 6xHis tag makes purification and immobilization easier for antibody screening assays. Researchers might find this protein useful in ELISA-based screening to identify high-affinity antibodies from hybridoma supernatants or phage display libraries. Since the extracellular domain represents the native antigenic surface exposed during viral infection, it appears well-suited for developing research-grade antibodies for RSV studies.

2. Protein-Protein Interaction Studies

The 6xHis-tagged RSV F0 protein could be valuable in pull-down assays to identify cellular proteins that interact with the viral fusion protein during infection. The histidine tag allows for efficient immobilization on nickel-based resins, which helps capture potential binding partners from cell lysates. This approach may help researchers map the molecular interactions between RSV fusion protein and host cell surface receptors or intracellular proteins. Studies like these contribute to our understanding of how RSV enters cells and causes disease.

3. Structural and Biophysical Characterization

This recombinant protein provides material for structural biology studies, including X-ray crystallography, NMR spectroscopy, or cryo-electron microscopy analysis of the RSV F0 extracellular domain. The expressed region (27-529aa) covers the major antigenic and functional domains of the fusion protein. Researchers can examine conformational changes, protein folding, and domain organization through techniques such as circular dichroism spectroscopy or dynamic light scattering. The purified protein also makes possible thermal stability studies and binding kinetics analysis through surface plasmon resonance.

4. Vaccine Antigen Research and Immunogenicity Studies

The recombinant F0 extracellular domain might be evaluated as a potential vaccine antigen in preclinical animal studies to assess immunogenicity and immune response profiles. Researchers could formulate this protein with various adjuvants to study antibody responses, T-cell activation, and protective immunity in mouse or other animal models. The protein may also prove useful for developing virus-like particles or other vaccine delivery platforms for RSV research. Comparative immunogenicity studies between different RSV strains or protein variants could be conducted using this standardized antigen preparation.

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.