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

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| **Product Code** | CSB-EP356041HPO |
| **Relevance** | During virus entry, induces fusion of viral and cellular membranes leading to delivery of the nucleocapsid into the cytoplasm. The fusogenic activity is inactive untill entry into host cell endosome, where a furin-like protease cleaves off a small peptide between F1 and F2. Interacts directly with heparan sulfate and may participates in virus attachment. Furthermore, the F2 subunit was identifed as the major determinant of RSV host cell specificity. Later in infection, proteins F expressed at the plasma membrane of infected cells can mediate fusion with adjacent cells to form syncytia, a cytopathic effect that could lead to tissue necrosis. The fusion protein is also able to trigger p53-dependent apoptosis |
| **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 |
| **Storage Buffer** | Tris-based buffer,50% glycerol |
| **Product Type** | Recombinant Protein |
| **Immunogen Species** | Human respiratory syncytial virus A (strain A2) |
| **Purity** | Greater than 90% as determined by SDS-PAGE. |
| **Sequence** | NITEEFYQSTCSAVSKGYLSALRTGWYTSVITIELSNIKENKCNGTDAKVKLIKQ ELDKYKNAVTELQLLMQSTPPTNNRARRELPRFMNYTLNNAKKTNVTLSKKRK RRFLGFLLGVGSAIASGVAVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVL TSKVLDLKNYIDKQLLPIVNKQSCSISNIETVIEFQQKNNRLLEITREFSVNAGVT TPVSTYMLTNSELLSLINDMPITNDQKKLMSNNVQIVRQQSYSIMSIIKEEVLAY VVQLPLYGVIDTPCWKLHTSPLCTTNTKEGSNICLTRTDRGWYCDNAGSVSFF PQAETCKVQSNRVFCDTMNSLTLPSEINLCNVDIFNPKYDCKIMTSKTDVSSSV ITSLGAIVSCYGKTKCTASNKNRGIIKTFSNGCDYVSNKGMDTVSVGNTLYYVN KQEGKSLYVKGEPIINFYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELLHN VNAGKSTTNIMITT |
| **Research Area** | others |
| **Source** | E.coli |
| **Target Names** | F |
| **Protein Names** | Recommended name: Fusion glycoprotein F0 Short name= Protein F Cleaved into the following 2 chains: 1. Fusion glycoprotein F2 2. Fusion glycoprotein F1 |
| **Expression Region** | 27-529aa |
| **Notes** | Repeated freezing and thawing is not recommended. Store working aliquots at |

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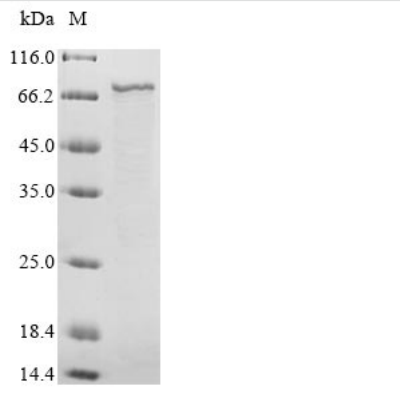
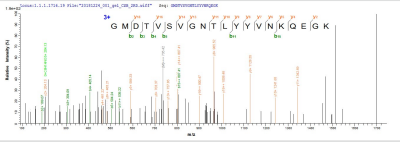
| | 4°C for up to one week. |
| **Tag Info** | N-terminal 6xHis-B2M-tagged |
| **Mol. Weight** | 69.9 kDa |
| **Protein Length** | Extracellular Domain |

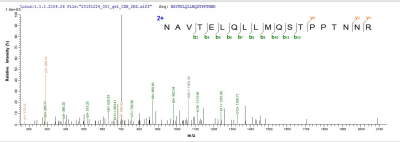
**Image**




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



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP356041HPO could indicate that this peptide derived from E.coli-expressed Human respiratory syncytial virus A (strain A2) F.



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**Description**

In the production of recombinant hRSV F protein, the gene for F (E.coli) was cloned into a vector and expressed as F protein in E.coli. The plasmids with the copy of F, or the expression vector, were often used to enhance gene expression. Every step of production was undergone with a strict QC system. N-terminal 6xHis-B2M tag was used in the process. The purity is 90% determined by SDS-PAGE.

F is synthesized as a precursor (F0) that must be proteolytically cleaved at polybasic residues, to generate the biologically active forms (F1 and F2). The F1 polypeptide exposes a fusion peptide, whose , whose function is to be inserted into target membrane. HN is thought to be implicated in the activation of F, possibly through direct interactions. The F2 subunit region was also demonstrated to play an important role in the activation of F. Although the fusion protein was found on the infected cell surface, it did not appear to be proteolytically cleaved to F1 and F2 subunits. Immunization of hamsters with the recombinant protein elicited antibody which neutralized infectivity and blocked fusion of virus-infected cells. Human parainfluenza viruses (hPIV) are pathogens responsible for upper and lower respiratory tract infections. Clinical variant strains of hPIV-2 that display unusual large syncytial cytopathic effects. Studies

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| | found that F (A96T) mutation strongly alters fusogenic properties of F hPIV-2, highlighting this key residue in the F2 subunit and its possible role in fusion regulation. |
| **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.<br>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. |