

Human respiratory syncytial virus (RSV) (A2) Prefusion glycoprotein F/RSV-preF Protein

General Information

Synonyms:	HRSVgp8;F Protein
Species:	RSV
Expression Host:	CHO Cells
Molecular Weight:	54.5 kDa (predicted); 57.6 kDa (reducing conditions)

QC Testing

Biological Activity:	<ol style="list-style-type: none">1. Immobilized Human respiratory syncytial virus (RSV) (A2) Prefusion glycoprotein F/ RSV-preF Protein at 0.5µg/mL (100µL/well) can bind RSV specific antibody which targets antigenic site II, the EC50 is 0.5 ng/mL-1.7 ng/mL.2. Immobilized Human respiratory syncytial virus (RSV) (A2) Prefusion glycoprotein F/ RSV-preF Protein at 0.5µg/mL (100µL/well) can bind RSV specific antibody which targets antigenic Site Ø , the EC50 is 0.45 ng/mL-1.35 ng/mL (Routinely tested).3. Immobilized Human respiratory syncytial virus (RSV) (A2) Prefusion glycoprotein F/ RSV-preF Protein at 0.5µg/mL (100µL/well) can bind prefusion specific antibody which targets antigenic Site V, the EC50 is 0.05 ng/mL-0.15 ng/mL(Routinely tested).
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Human respiratory syncytial virus (HRSV) is the most common etiological agent of acute lower respiratory tract

disease in infants and can cause repeated infections throughout life. It is classified within the genus pneumovirus of the family paramyxoviridae. Like other members of the family, HRSV has two major surface glycoproteins (G and F) that play important roles in the initial stages of the infectious cycle. The G protein mediates attachment of the virus to cell surface receptors, while the F protein promotes fusion of the viral and cellular membranes, allowing entry of the virus ribonucleoprotein into the cell cytoplasm. The fusion (F) protein of RSV is synthesized as a nonfusogenic precursor protein (F), which during its migration to the cell surface is activated by cleavage into the disulfide-linked F1 and F2 subunits. This fusion is pH independent and occurs directly at the outer cell membrane, and the F2 subunit was identified as the major determinant of RSV host cell specificity. The trimer of F1-F2 interacts with glycoprotein G at the virion surface. Upon binding of G to heparan sulfate, the hydrophobic fusion peptide is unmasked and induces the fusion between host cell and virion membranes. Notably, RSV fusion protein is unique in that it is able to interact directly with heparan sulfate and therefore is sufficient for virus infection. Furthermore, the fusion protein is also able to trigger p53-dependent apoptosis.

Reference

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García-Beato R. et al., 2000, J Gen Virol. 81: 919-27.
Zlateva KT. et al., 2004, J Virol. 78: 4675-83.
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