Human respiratory syncytial virus (RSV) Fusion protein / RSV-F (Strain RSS-2) Protein (His Tag)

Catalog Number: 40037-V08B

General Information

Gene Name Synonym:

F; HRSVgp08

Protein Construction:

A DNA sequence encoding the extracellular domain of human RSV (strain RSS-2) fusion protein (P11209) (Met 1-Thr 529) was expressed with a polyhistidine tag at the C-terminus.

Source: RSV

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Phe 22

Molecular Mass:

The recombinant human RSV (strain RSS-2) consists of 519 amino acids and predicts a molecular mass of 57.8 kDa. The RSV F0 precursor protein is cleaved into the disulfide-linked F1 and F2 subunits. As a result of glycosylation, the apparent molecular mass of the F0 and F1 is approximately 63 kDa and 44-53 KDa in SDS-PAGE under reducing conditions, respectively.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

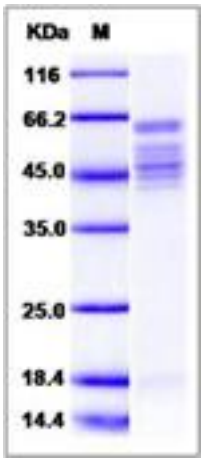
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 (F0), 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 identifed 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.

References

1.Martin-Gallardo A. et al., 1993, J Gen Virol. 74 (3): 453-8. 2.Jose A M. et al., 1997, J Gen Virol. 78: 2411-8. 3.Feldman SA. et al., 1999, J Virol. 73 (8): 6610-7.