

Human RSV (B1) glycoprotein G / RSV-G Protein (His Tag)

Catalog Number: 13029-V08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

G

Protein Construction:

A DNA sequence encoding the extracellular domain of human RSV strain B1 glycoprotein G (O36633-1) (His 67-Ala 299) was fused with a polyhistidine tag at the C-terminus and a signal peptide at the N-terminus.

Source: RSV

Expression Host: Human 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 °C

Predicted N terminal: His 67

Molecular Mass:

The secreted recombinant human RSV strain B1 glycoprotein G comprises 244 amino acids with a predicted molecular mass of 27 kDa. As a result of highly glycosylation, the apparent molecular mass of the recombinant protein is approximately 80-90 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

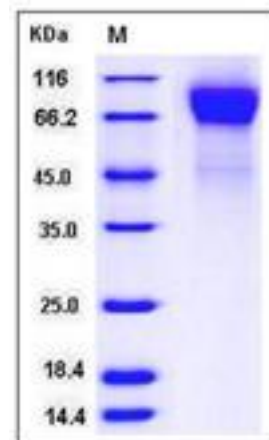
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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. HRSV G protein is a type II glycoprotein of 289-299 amino acids (depending on the virus strain) with a signal/anchor hydrophobic domain and is extensively modified by the addition of both N- and O-linked oligosaccharides to achieve the mature form of 80-90 kDa. The C-terminal ectodomain of the G protein has a central region and four cysteines which are conserved in all HRSV isolates and have been proposed as the putative receptor binding site. The G protein mediates attachment of the virus to the host cell membrane by interacting with heparan sulfate, initiating the infection. As similar to mucins in amino acid compositions, the RSV G protein can interact with host CX3CR1, the receptor for the CX3C chemokine fractalkine, and thus modulates the immune response and facilitate infection. Secreted glycoprotein G helps RSV escape antibody-dependent restriction of replication by acting as an antigen decoy and by modulating the activity of leukocytes bearing Fcγ receptors. Unlike the other paramyxovirus attachment proteins, HRSV-G lacks both neuraminidase and hemagglutinating activities.

References

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

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Fax : +86-10-51029969 • Tel: +86-400-890-9989 • <http://www.sinobiological.com>