**Proteins** 

## **Product** Data Sheet



## glycoprotein/G Protein, HRSV (sf9, His)

Cat. No.: HY-P75812

Synonyms: Human respiratory syncytial virus (RSV) (A, rsb1734) glycoprotein G / RSV-G Protein (93%

Species: Virus

Sf9 insect cells Source: Accession: P27022 (N66-R297)

Gene ID:

Molecular Weight: 40-55 kDa

## **PROPERTIES**

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris, 100 mM NaCl, pH 8.0, 10% Glycerol, 0.5 mM EDTA, 0.5 mM PMSF. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu g/mL$ in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

## **DESCRIPTION**

Background

The glycoprotein/G Protein, a crucial component of the immune response, forms the interleukin-31 receptor by associating with OSMR. This receptor plays a vital role in activating STAT3, as well as STAT1 and STAT5 to a lesser extent. It is known to be involved in skin immunity and is responsible for mediating IL31-induced itch, potentially by relying on cation channels TRPA1 and TRPV1. Moreover, the glycoprotein/G Protein positively regulates the numbers and cycling status of immature subsets of myeloid progenitor cells in the bone marrow, both in vivo and in vitro, thereby enhancing myeloid progenitor cell survival. It forms a heterodimer with OSMR and interacts with JAK1 and STAT3 to carry out its functions. In terms of viral infection, this glycoprotein/G Protein attaches the virion to the host cell membrane by interacting with heparan sulfate, initiating the infection process. It also interacts with host CX3CR1, the receptor for the CX3C chemokine fractalkine, to modulate the immune response and facilitate infection. Unlike other paramyxovirus attachment proteins, it lacks both neuraminidase and hemagglutinating activities. Additionally, it aids the virus in escaping antibody-dependent restriction of replication by acting as an antigen decoy and modulating the activity of leukocytes bearing Fc-gamma receptors.

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