



# SZABO SCANDIC

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## Produktinformation



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- Expressversand

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# PRODUCT INFORMATION



## RSV F Protein Extracellular Domain (Strain RSS-2)

Item No. 37020

### Overview and Properties

**Synonyms:** Respiratory Syncytial Virus F Protein, Respiratory Syncytial Virus Fusion Protein, RSV Fusion Protein

**Source:** Recombinant C-terminal His-tagged RSV F protein extracellular domain expressed in insect cells

**Amino Acids:** 22-529

**Uniprot No.:** P03420

**Molecular Weight:** 57.8 kDa

**Storage:** -80°C (as supplied)

**Stability:** ≥1 year

**Purity:** ≥95% estimated by SDS-PAGE

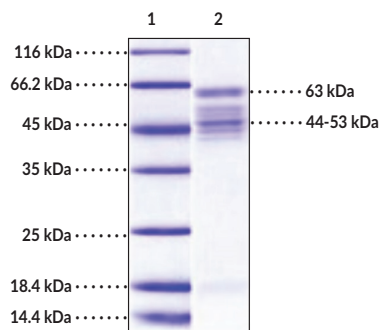
**Supplied in:** Lyophilized from sterile 20 mM Tris, pH 7.4, with 500 mM sodium chloride and 10% glycerol

**Endotoxin Testing:** <1.0 EU/μg, determined by the LAL endotoxin assay

**Bioactivity:** See figures for details

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Image



Lane 1: MW Markers  
Lane 2: RSV F Protein Extracellular Domain

**SDS-PAGE Analysis of RSV F Protein Extracellular Domain.** This protein has a calculated molecular weight of 57.8 kDa. It has an apparent molecular weight of approximately 63 and 44-53 kDa by SDS-PAGE under reducing conditions due to glycosylation.

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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# PRODUCT INFORMATION



## Description

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Respiratory syncytial virus (RSV) fusion (F) protein is a surface glycoprotein encoded by the *F* gene in RSV RNA.<sup>1</sup> It is synthesized as an inactive precursor protein,  $F_0$ , that undergoes proteolytic cleavage to release the  $F_1$  and  $F_2$  subunits, which are joined together by two disulfide bonds.<sup>2</sup> Mature RSV F protein is composed of an N-terminal fusion peptide (FP), two heptad repeats (HRs), a transmembrane domain, and a cytoplasmic tail and assembles into homotrimers on the virus surface.<sup>1</sup> Upon insertion of the FP in the target cell membrane, the HRs form a six-helical bundle (6-HB) that enables RSV to fuse with the target cell. RSV F protein is highly conserved between RSV subtypes A and B with approximately 90% amino acid identities.<sup>3</sup> RSV is the most common causative agent of pediatric lower respiratory tract infections.<sup>4</sup> Cayman's RSV F Protein Extracellular Domain (Strain RSS-2) protein consists of 519 amino acids, has a calculated molecular weight of 57.8 kDa, and a predicted N-terminus of Phe22 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the  $F_0$  and  $F_1$  proteins is approximately 63 and 44-53 kDa, respectively, due to glycosylation.

## References

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1. Graham, B.S. and Anderson, L.J. Challenges and opportunities for respiratory syncytial virus vaccines. *Curr. Top. Microbiol. Immunol.* **372**, 391-404 (2013).
2. Day, N.D., Branigan, P.J., Liu, C., *et al.* Contribution of cysteine residues in the extracellular domain of the F protein of human respiratory syncytial virus to its function. *Virology*. **3**, 34 (2006).
3. Choi, S.-H., Park, K.S., and Kim, Y.-J. Analysis of respiratory syncytial virus fusion protein from clinical isolates of Korean children in palivizumab era, 2009-2015. *J. Infect. Chemother.* **25(7)**, 514-519 (2019).
4. Nair, H., Nokes, D.J., Gessner, B.D., *et al.* Global burden of acute lower respiratory infections due to respiratory syncytial virus in young children: A systematic review and meta-analysis. *Lancet* **375(9725)**, 1545-1455 (2010).

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