PRODUCT INFORMATION

RSV F Protein Chimeric Monoclonal Antibody (Clone RSHZ19 (Felvizumab))

Item No. 37173

Overview and Properties

Contents:	This vial contains 200 µg of protein A-affinity purified monoclonal antibody
Synonyms:	Respiratory Syncytial Virus F Protein, Respiratory Syncytial Virus Fusion Protein, RSV Fusion Protein
Immunogen:	Recombinant human-targeted RSV F
Cross Reactivity:	(+) F protein
Species Reactivity:	(+) RSV; other species not tested
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 0.02% ProClin™ 300
Concentration:	1 mg/ml
Clone:	RSHZ19 (Felvizumab)
Host:	Chimeric Monoclonal Antibody
Isotype:	IgG1κ
Application:	ELISA; the optimal working concentration/dilution should be determined empirically.

Description

Respiratory syncytial virus (RSV) fusion (F) protein is a surface glycoprotein encoded by the *F* gene in RSV RNA.[1] 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.[2] 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.[1] 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.[3] RSV is the most common causative agent of pediatric lower respiratory tract infections.[4] Cayman's RSV F Protein Chimeric Monoclonal Antibody (Clone RSHZ19 (Felvizumab)) was produced recombinantly from the original humanized RSHZ19 antibody sequence, substituting the mouse antigen-binding domain with the rabbit IgG1 antigen-binding domain, and can be used for ELISA and in functional assays. The RSHZ19 antibody was generated by fusing human IgG1 constant domains to the antigen-binding domain of a mouse anti-RSV F protein monoclonal antibody.[5]

References

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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).
5. Tempest, P.R., Bremner, P., Lambert, M., *et al.* Reshaping a human monoclonal antibody to inhibit human respiratory syncytial virus infection in vivo. *Biotechnology (N.Y.)* **9(3),** 266-271 (1991).

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