

PRODUCT INFORMATION



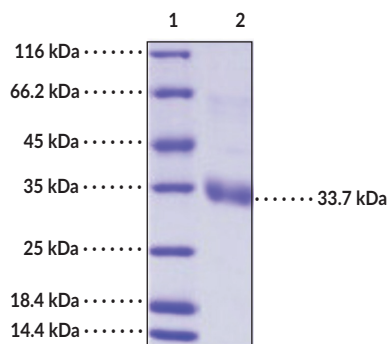
MERS-CoV Spike Glycoprotein RBD (Strain EMC/2012) (recombinant) Item No. 40876

Overview and Properties

Synonyms:	MERS-CoV Spike Glycoprotein Receptor-Binding Domain, Middle East Respiratory Syndrome Coronavirus Spike Glycoprotein RBD, Middle East Respiratory Syndrome Coronavirus Spike Glycoprotein Receptor-Binding Domain
Source:	Recombinant MERS-CoV C-terminal His-tagged spike glycoprotein RBD expressed in insect cells
Amino Acids:	367-606
Uniprot No.:	KOBRG7
Molecular Weight:	27.7 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥90% as estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 20 mM Tris, 500 mM sodium chloride, 10% glycerol, pH 8.0
Endotoxin Testing:	< 1.0 EU/μg, determined by the LAL endotoxin assay
Protein Concentration:	<i>batch specific</i> mg/ml

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

Image



Lane 1: MW Markers
Lane 2: MERS-CoV Spike Glycoprotein RBD (Strain EMC/2012) (recombinant)

SDS-PAGE Analysis of MERS-CoV Spike Glycoprotein RBD (Strain EMC/2012) (recombinant). This protein has a calculated molecular weight of 27.7 kDa. It has an apparent molecular weight of approximately 33.7 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.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Middle East respiratory syndrome coronavirus (MERS-CoV) spike glycoprotein is a viral structural protein that contains the receptor-binding domain (RBD).¹ MERS-CoV is an enveloped positive-stranded RNA virus, a member of the *Betacoronavirus* genus, and the causative agent of MERS, an acute respiratory disease that often leads to pneumonia and renal failure.^{1,2} The MERS-CoV spike glycoprotein mediates viral attachment to host cells and virus-cell-mediated membrane fusion during infection.¹ It is composed of an S1 subunit, which contains the RBD that binds to host dipeptidyl peptidase-4 (DPP-4), and an S2 subunit containing heptad repeat regions 1 and 2, which are responsible for membrane fusion, as well as a transmembrane domain and a cytoplasmic tail. The RBD of the MERS-CoV spike glycoprotein is one of the targets for neutralizing antibodies.¹ Cayman's MERS-CoV Spike Glycoprotein RBD (Strain EMC/2012) (recombinant) protein consists of 251 amino acids and has a calculated molecular weight of 27.7 kDa.

References

1. Du, L., Yang, Y., Zhou, Y., *et al.* MERS-CoV spike protein: A key target for antivirals. *Expert Opin. Ther. Targets* **21(2)**, 131-143 (2017).
2. Rabaan, A.A., Al-Ahmed, S.H., Haque, S., *et al.* SARS-CoV-2, SARS-CoV, and MERS-CoV: A comparative overview. *Infez. Med.* **28(2)**, 174-184 (2020).

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