Data Sheet (Cat.No.TMPK-00437)

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SARS-COV-2 Spike RBD Protein (His & Avi)

General Information

Synonyms:	S glycoprotein RBD;Spike protein RBD;S protein RBD
Protein Construction:	Arg319-Asn532
Species:	SARS-CoV-2
Expression Host:	HEK293 Cells
Accession:	A0A6G7K2L4
Molecular Weight:	27 kDa (predicted). Due to glycosylation, the protein migrates to 36-40 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	1. Immobilized SARS-COV-2 Spike RBD, His Tag at 0.5μg/ml (100μl/Well) on the plate. Dose response curve for Human ACE2, hFc Tag with the EC50 of 7.5ng/ml determined by ELISA (QC Test). 2. Human ACE2, hFc Tag captured on Protein A chip, can bind SARS-COV-2 Spike RBD, His Tag with an affinity constant of 13.8nM as determined in a SPR assay.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1 EU/μg by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20℃ to -80℃ for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at-80℃. For reconstituted protein solutions, the solution can be stored at -20℃ to -80'c for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

The spike protein (S) of coronavirus (CoV) attaches the virus to its cellular receptor, angiotensin-converting enzyme 2 (ACE2). A defined receptor-binding domain (RBD) on S mediates this interaction.The S protein plays key

parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity.

Reference

Larry J Anderson, Ralph S Baric. Emerging Human Coronaviruses - Disease Potential and Preparedness[J]. N Engl J Med, 2012, 367(19):1850-1852.