Data Sheet (Cat.No.TMPK-00437)

TargetMol

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:	P0DTC2
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:	< 1.0 EU/μg of the protein as determined 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°C to -80°C 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°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry 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.