b|e|i RESOURCES

SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for NR-52307

Spike Glycoprotein Receptor Binding Domain (RBD) from SARS-Related Coronavirus 2, Wuhan-Hu-1 with C-Terminal Histidine Tag, Recombinant from Baculovirus

Catalog No. NR-52307

This reagent is the tangible property of the U.S. Government.

Product Description:

A recombinant form of the spike glycoprotein receptor binding domain (RBD) from severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), Wuhan-Hu-1 (GenPept: QHD43416) was produced in Sf9 insect cells using a baculovirus expression system and purified by nickel affinity and ion exchange chromatography. NR-52307 contains 223 residues of the SARS-CoV-2 spike glycoprotein RBD and features a C-terminal hexa-histidine tag.

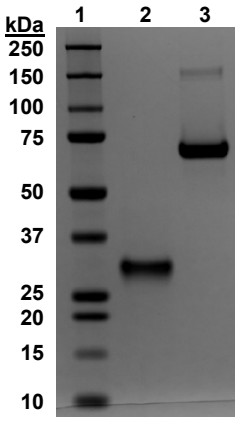
Lot: 70039120 **Manufacturing Date: 12OCT2020**

TEST	SPECIFICATIONS	RESULTS
Appearance	Clear and colorless	Clear and colorless
SDS-PAGE Analysis (Coomassie Blue)	Protein band of interest represents > 90% of total staining intensity	Protein band of ~ 31 kDa represents > 90% of total staining intensity (Figure 1)[1]
Concentration by Bicinchoninic Acid Assay		
Bovine Serum Albumin (standard)	Report results	0.32 mg per mL
Final Product		
Amount per vial	Report results	35 µg
Volume per vial	Report results	110 µL
Functional Activity by Western Blot Analysis		
Monoclonal anti-histidine tag	Reactive	Reactive (Figure 2)[2]
Sterility	0.2 µm sterile-filtered	0.2 µm sterile-filtered

[1]The recombinant protein migrated to a slightly larger size than was expected, likely caused by glycosylation common in recombinant spike proteins derived from coronaviruses. For more information, please see Chakraborti, S., et al. "The SARS Coronavirus S Glycoprotein Receptor Binding Domain: Fine Mapping and Functional Characterization." Virol. J. 2 (2005): 73. PubMed: 16122388.

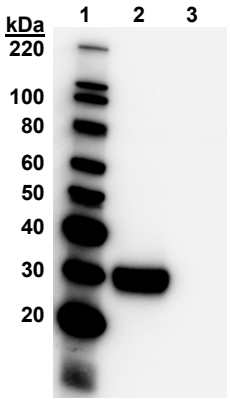
[2]Using a 1:1000 dilution of mouse monoclonal anti-histidine tag (Clontech 631212) as primary antibody and a 1:1000 dilution of HRP-conjugated goat anti-mouse IgG (R&D Systems HAF007) as secondary antibody.

Figure 1: SDS-PAGE Analysis



Lane 1: Precision Plus Protein™ Standard (5 µL)
Lane 2: NR-52307 (2 µg)
Lane 3: Bovine serum albumin (2 µg)

Figure 2: Anti-Histidine Western Blot Analysis



Lane 1: MagicMark™ XP Protein Standard (5 µL)
Lane 2: NR-52307 (0.2 µg)
Lane 3: Bovine serum albumin (0.2 µg)

BEI Resources
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/Heather Couch/
Heather Couch 20 JAN 2021
Program Manager or designee, ATCC Federal Solutions

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

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