

Spike Glycoprotein Receptor Binding Domain (RBD) from SARS-Related Coronavirus 2, Beta Variant with C-Terminal Histidine Tag, Recombinant from HEK293 Cells

Catalog No. NR-55278

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

Product Description:

A recombinant form of the spike (S) glycoprotein receptor binding domain (RBD) from severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), Beta variant [also referred to as South Africa variant; B.1.351 lineage] was produced by transfection of purified plasmid (derived from BEI Resources NR-54007) in human embryonic kidney HEK293F (Expi293F™; Gibco™ A14527) cells, purified by affinity chromatography (Ni-NTA agarose) and vialled in phosphate buffered saline (PBS), pH 7.4. NR-55278 lacks the signal sequence and contains 223 residues of the SARS-CoV-2 S glycoprotein RBD and features a C-terminal hexa-histidine tag. NR-55278 is a South Africa variant of SARS-CoV-2, which includes K417N, E484K and N501Y mutations in the S glycoprotein RBD as compared to the SARS-CoV-2 reference sequence (GenPept: [QHD43416](#)).

Lot: 70042546

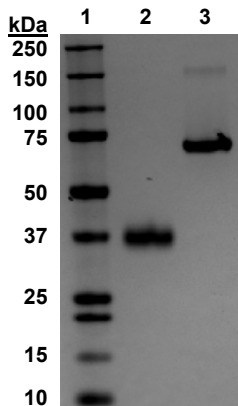
Manufacturing Date: 21APR2021

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 approximately 35 kDa represents 100% of total staining intensity (Figure 1) ¹
Concentration by Bradford Assay Bovine Serum Albumin (standard)	Report results	0.306 mg per mL
Vial Contents Amount per vial Volume per vial	Report results Report results	0.026 mg 0.085 mL
Functional Activity by Western Blot Analysis Monoclonal anti-histidine tag	Reactive	Reactive (Figure 2) ²
Filtration	0.2 µm sterile-filtered	0.2 µm sterile-filtered

¹The 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." *Virology*, 2 (2005): 73. PubMed: 16122388.

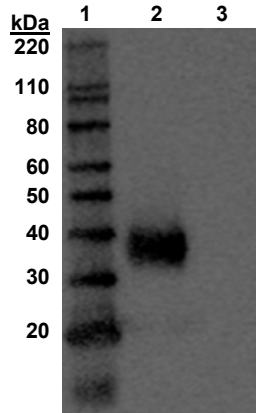
²Using a 1:5000 dilution of 6xHis Monoclonal Antibody (Takara 631212) as primary antibody and a 1:1000 dilution of HRP-conjugated goat anti-mouse IgG (R&D Systems HAF007) as secondary antibody.

Figure 1: SDS-PAGE Analysis



Lane 1: Precision Plus Protein™ Standard (6 µL)
 Lane 2: NR-55278 (1 µg)
 Lane 3: Bovine serum albumin (1 µg)

Figure 2: Anti-Histidine Western Blot Analysis



Lane 1: MagicMark™ XP Protein Standard (5 µL)
 Lane 2: NR-55278 (0.5 µg)
 Lane 3: Bovine serum albumin (0.5 µg)

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