

**Spike Glycoprotein (Stabilized) from SARS-Related Coronavirus 2, B.1.1.7 Variant (9 Mutations) with C-Terminal Histidine Tag, Recombinant from HEK293 Cells**

**Catalog No. NR-55421**

**ACROBiosystems Catalog No. SPN-C52H6**

**Product Description:**

A recombinant form of the spike (S) glycoprotein from severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), B.1.1.7 variant [United Kingdom (UK) variant; also known as 20B/501Y.V1 or VOC202012/01] was produced by transient transfection in human embryonic kidney HEK293 cells and purified by affinity chromatography. NR-55421 lacks the signal sequence and contains 1195 residues (ectodomain) of the SARS-CoV-2 S glycoprotein; the recombinant protein was modified to remove the polybasic S1/S2 cleavage site (R683A and R685A), stabilized with multiple proline substitutions (F817P, A892P, A899P, A942P, K986P and V987P, wild type numbering) and includes a T4 fibrin trimerization motif and a poly-histidine tag at the C-terminus. NR-55421 is a variant of SARS-CoV-2 which contains the HV69-70del, Y144del, N501Y, A570D, D614G, P681H, T716I, S982A and D1118H mutations in the S glycoprotein as compared to the SARS-CoV-2 reference sequence (GenPept: [QHD43416](#)). NR-55421 lot 4353-213RF1-W9 was lyophilized from 79 µL bulk protein in phosphate-buffered saline with 10% trehalose.

**Lot: 4353-213RF1-W9**

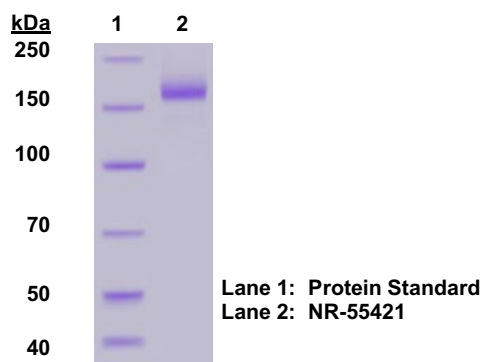
**Receipt Date: 13MAY2021**

TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	White powder	White powder
<b>Purity</b> SDS-PAGE Analysis	Protein band of interest represents > 90% of total staining intensity	Dominant band of ~ 165 kDa represents 97.29% of total staining intensity (Figure 1) <sup>1</sup>
<b>Final Product</b> Amount per vial	Report results	50 µg
<b>Functional Activity by ELISA</b>	Reactive	Reactive <sup>2</sup>
<b>Filtration</b>	0.2 µm sterile-filtered	0.2 µm sterile-filtered
<b>Endotoxin Content</b> (Limulus Amoebocyte Lysate Assay)	< 1.0 EU per µg	< 1.0 EU per µg

<sup>1</sup>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." *Virology*, 2 (2005): 73. PubMed: 16122388.

<sup>2</sup>Measured by its binding ability in a functional ELISA. Immobilized NR-55421 at 1 µg/mL can bind human ACE2, Fc tag (ACROBiosystems Cat. No. AC2-H5257) with a linear range of 0.1 to 3 ng/mL.

**Figure 1: SDS-PAGE Analysis**



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