

**Spike Glycoprotein Receptor Binding Domain (RBD) from SARS-Related Coronavirus 2, N440K Variant with C-Terminal Histidine Tag, Recombinant from HEK293 Cells**

**Catalog No. NR-55405**

**ACROBiosystems Catalog No. SRD-C52H2**

**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), N440K variant was produced by transient transfection in human embryonic kidney HEK293 cells and purified by affinity chromatography. NR-55405 lacks the signal sequence, contains 219 residues of the SARS-CoV-2 S glycoprotein (amino acid residues R319 to K537) and features a C-terminal poly-histidine tag. NR-55405 is a variant of SARS-CoV-2 which contains the N440K mutation in the S glycoprotein as compared to the SARS-CoV-2 reference sequence (GenPept: [QHD43416](#)). NR-55405 lot 4136-20BUF1-UP was lyophilized from 167 µL bulk protein in phosphate-buffered saline, pH 7.4 with 10% trehalose.

**Lot: 4136-20BUF1-UP**

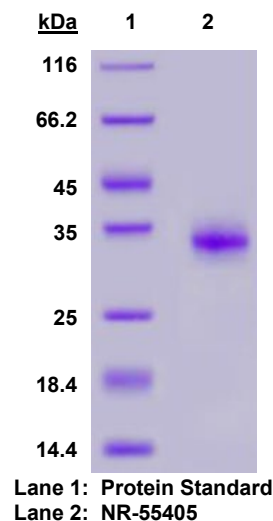
**Receipt Date: 13MAY2021**

| TEST   | SPECIFICATIONS  | RESULTS  |
|--|---|--|
| Appearance   | White powder  | White powder   |
| SDS-PAGE Analysis                                      | Protein band of interest represents > 95% of total staining intensity | Dominant band of ~ 34 kDa represents > 95% of total staining intensity (Figure 1) <sup>1</sup> |
| Final Product<br>Amount per vial                       | Report results  | 100 µg   |
| Functional Activity by ELISA                           | Reactive  | Reactive <sup>2</sup>  |
| Filtration   | 0.2 µm sterile-filtered   | 0.2 µm sterile-filtered  |
| Endotoxin Content<br>(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>Using 1 µg per mL (100 µL per well) of immobilized human ACE2, Fc tag (ACROBiosystems Cat. No. AC2-H5257) with a linear range of 10 to 78 ng per mL

**Figure 1: SDS-PAGE Analysis**



/Heather Couch/

Heather Couch

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