

**Spike Glycoprotein (Stabilized) from SARS-Related Coronavirus 2, A.23.1 Lineage with C-Terminal Histidine and Avi Tags, Recombinant from HEK293 Cells**

**Catalog No. NR-55616**

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

**Product Description:**

A recombinant form of the spike (S) glycoprotein from severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), A.23.1 lineage was produced in human embryonic kidney HEK293 (Freestyle 293F) cells and purified by immobilized metal affinity (Ni-NTA) and gel filtration (Superdex 16-600) chromatography. NR-55616 lacks the signal sequence and contains 1196 residues (ectodomain) of the SARS-CoV-2 S glycoprotein; the recombinant protein was stabilized by substitution at the furin S1/S2 cleavage site (RRAR→GSAS; residues 682 to 685) and KV→PP mutations (residues 986 and 987; wild type numbering), and includes a T4 foldon trimerization domain, HRV3C protease cleavage site and C-terminal octa-histidine tag fused to an AviTag™ BirA biotinylation acceptor sequence. NR-55616 includes F157L, V367F, Q613H and P681R mutations in the S glycoprotein as compared to the SARS-CoV-2 reference sequence (GenPept: [QHD43416](#)). Quality control testing was completed just prior to vialing.

**Lot: 70045332**

**Manufacturing Date: 17JUN2021**

TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Report results	Clear and colorless
<b>Purity</b> Analytical Fast Protein Liquid Chromatography (FPLC)	Report results	Peak observed at expected retention time (Figure 1)
<b>Protein Concentration (A<sub>280</sub>)</b>	Report results	0.25 mg per mL
<b>Final Product</b> Amount per vial Volume per vial	Report results Report results	25 µg 100 µL
<b>Functional Activity by Direct ELISA</b> SARS-CoV-2 spike (S309) antibody <sup>1</sup> SARS-CoV-2 spike S1 antibody <sup>2</sup>	Report results Report results	Reactive (Figure 2) Reactive (Figure 3)

<sup>1</sup>Pinto, D., et al. "Cross-Neutralization of SARS-CoV-2 by a Human Monoclonal SARS-CoV Antibody." *Nature* 583 (2020): 290-295. PubMed: 32422645.

<sup>2</sup>Using SARS-CoV-2 (2019-nCoV) Spike S1 Antibody, Rabbit mAb (Sino Biological catalog number 40150-R007)

**Figure 1: Analytical FPLC**

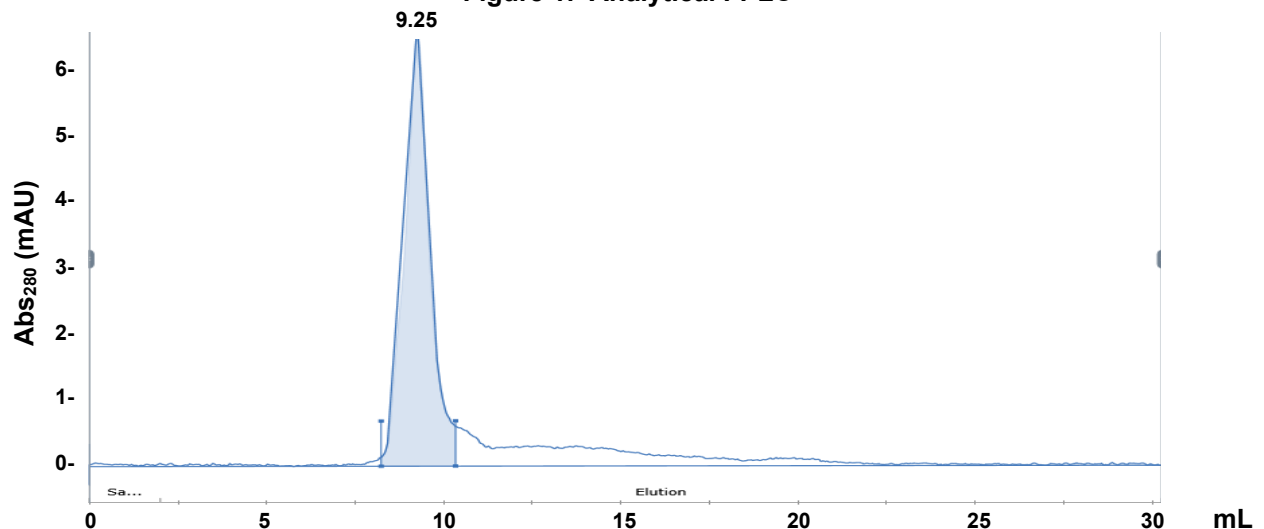


Figure 2: Direct ELISA with S309 mAb

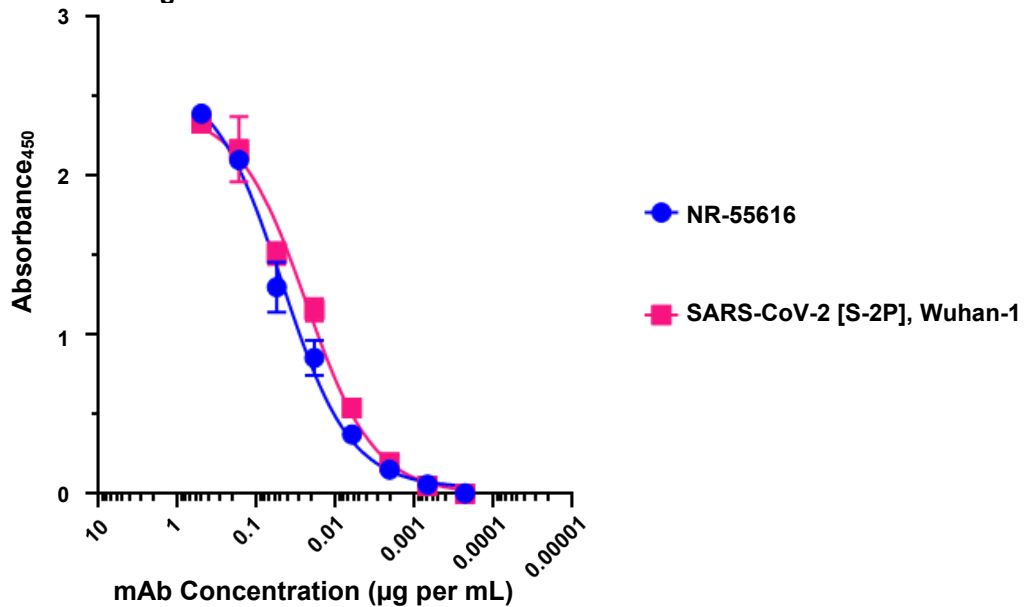
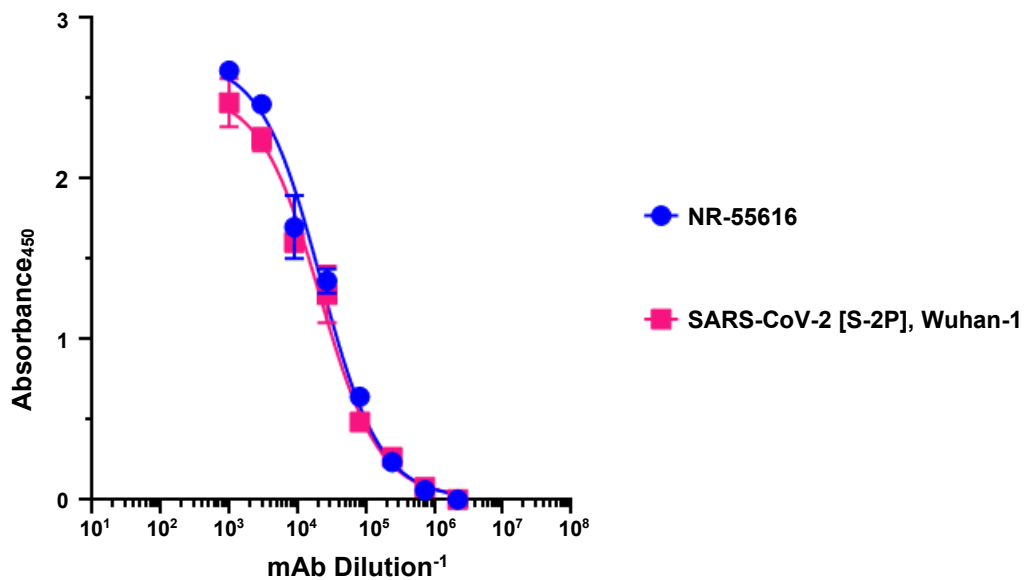


Figure 3: Direct ELISA with Spike S1 mAb



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