

Spike Glycoprotein (Stabilized) from SARS-Related Coronavirus 2, (Lineage BA.2.75 Omicron Variant) with C-Terminal Histidine and Avi Tags, Recombinant from HEK293 Cells

Catalog No. NR-58991

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), lineage BA.2.75 (Omicron variant) was produced in human embryonic kidney HEK293 (Freestyle 293F) cells and purified by immobilized metal affinity (Ni-NTA) and gel filtration (Superdex) chromatography. NR-58991 lacks the signal sequence and contains 1193 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-58991 includes T19I, delL24-P26, A27S, G142D, K147E, W152R, F157L, I210V, V213G, G257S, G339H, S371F, S373P, S375F, T376A, D405N, R408S, K417N, N440K, G446S, N460K, S477N, T478K, E484A, Q498R, N501Y, Y505H, D614G, H655Y, N679K, P681H, N764K, D796Y, Q954H and N969K 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: 70057225

Manufacturing Date: 29MAR2023

TEST	SPECIFICATIONS	RESULTS
Appearance	Report results	Clear and colorless
Purity Analytical Fast Protein Liquid Chromatography (FPLC)	Report results	Peak observed at expected retention time (Figure 1)
Protein Concentration (A₂₈₀)	Report results	0.25 mg/mL
Final Product Amount per vial Volume per vial	Report results Report results	100 µg 400 µL
Functional Activity by Direct ELISA SARS-CoV-2 spike antibody ¹ SARS-CoV-2 spike S1 antibody ²	Report results Report results	Reactive (Figure 2) Reactive (Figure 3)

¹Using SARS-CoV-2 (2019-nCoV) Spike Antibody, Mouse mAb (Sino Biological catalog number 40592-MM117)

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

Figure 1: Analytical FPLC

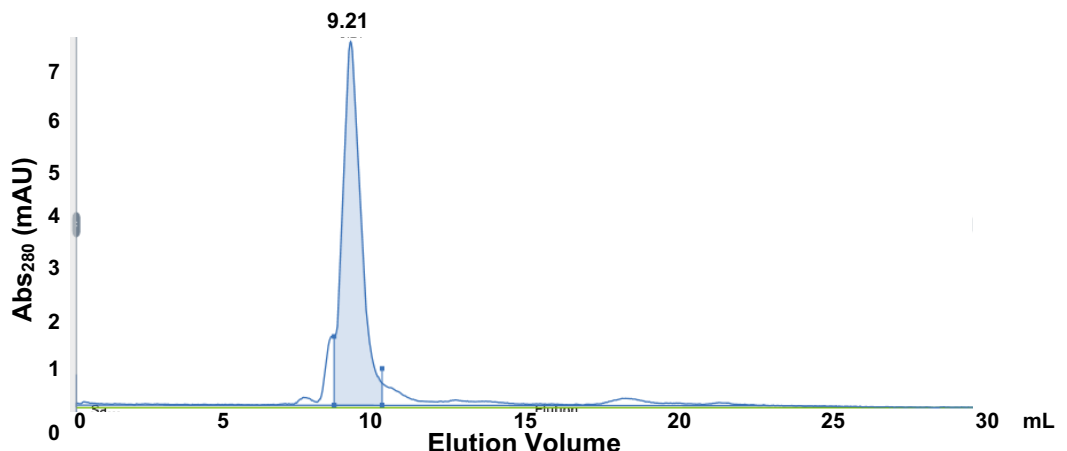


Figure 2: Direct ELISA with Spike mAb (Sino Biological 40592-MM117)

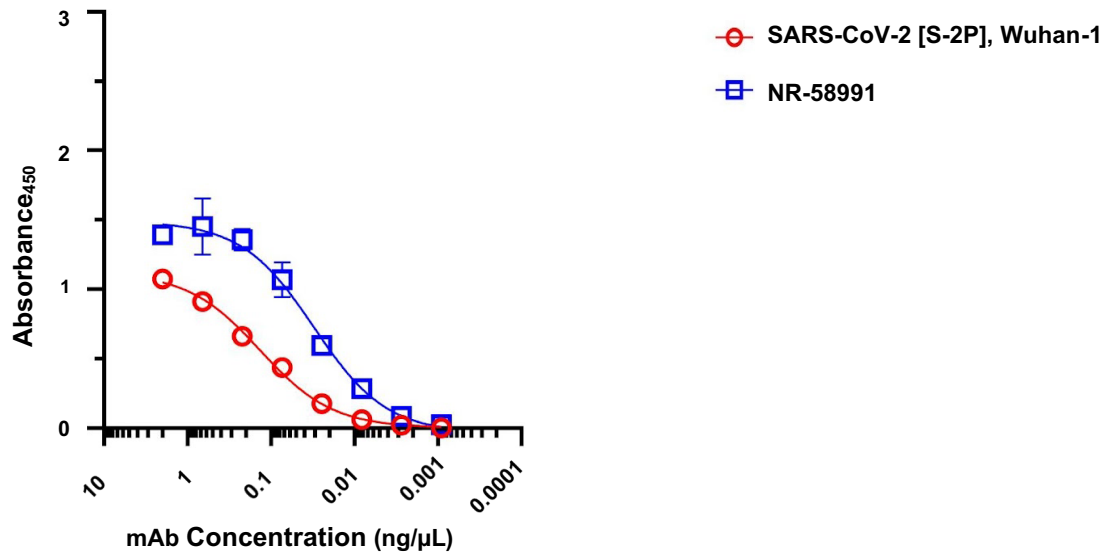
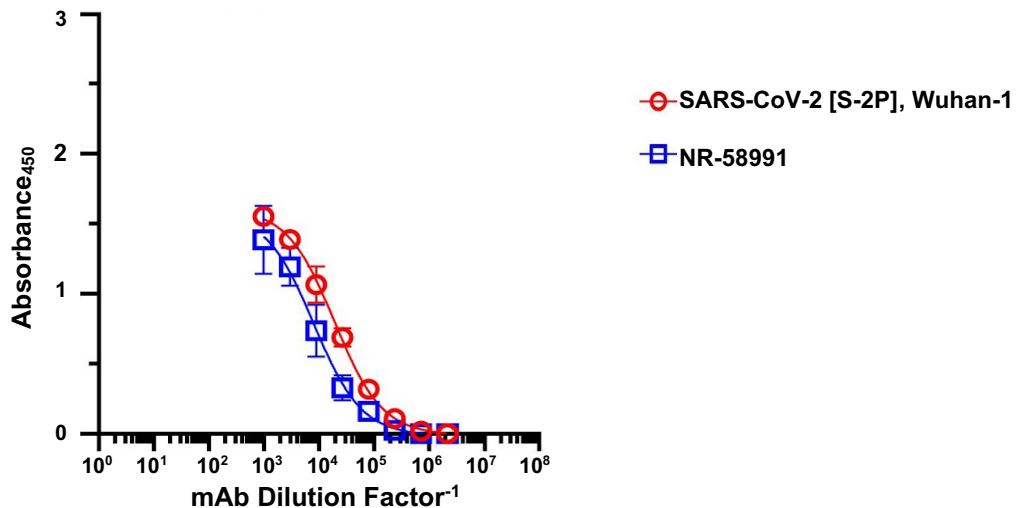


Figure 3: Direct ELISA with Spike S1 mAb (Sino Biological 40150-R007)



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