

Spike Glycoprotein (Stabilized) from SARS-Related Coronavirus 2, Wuhan-Hu-1 with C-Terminal Histidine and Avi Tags, Recombinant from HEK293F Cells

Catalog No. NR-53524

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), Wuhan-Hu-1 (GenPept: [QJE37812](#)) was produced in human embryonic kidney HEK293F cells and purified by immobilized metal (nickel) affinity and size exclusion chromatography. NR-53524 lacks the signal sequence and contains 1194 residues (ectodomain) of the SARS-CoV-2 spike glycoprotein; the recombinant protein was modified to remove the polybasic S1/S2 cleavage site (RRAR to A; residues 682 to 685), stabilized with a pair of mutations [K986P and V987P, wild type numbering (GenPept: [YP_009724390](#))] and includes a thrombin cleavage site, T4 foldon trimerization domain and C-terminal hexa-histidine tag fused to an AviTag™ BirA biotinylation acceptor sequence.

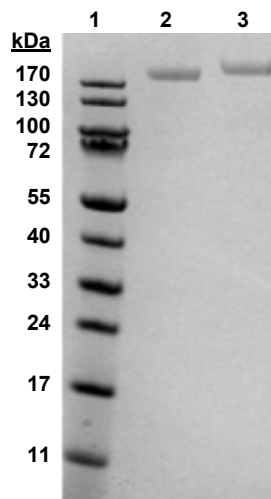
Lot: 70036557

Manufacturing Date: 25JUN2020

TEST	SPECIFICATIONS	RESULTS
Appearance	Clear and colorless	Clear and colorless
Purity SDS-PAGE analysis SEC-HPLC (pre-vial)	Protein band of interest represents > 90% of total staining intensity Report results	Protein band of > 170 kDa represents > 90% of total staining intensity (Figure 1) ¹ Single peak in elution profile (Figure 2)
Protein Concentration (A₂₈₀)	Report results	1 mg per mL
Final Product Amount per vial Volume per vial	Report results Report results	50 µg 50 µL
Dynamic Light Scattering	Report results	Aggregate detectable by scattering intensity; negligible aggregate mass (Figure 3)
Filtration	0.22 µm sterile-filtered	0.22 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.

Figure 1: SDS-PAGE Analysis



Lane 1: Fisher BioReagents™ EZ-Run™ prestained Rec protein ladder (1 µg)
Lane 2: NR-53524 (non-reduced; 1 µg)
Lane 3: NR-53524 (reduced; 1 µg)

Figure 2: SEC-HPLC

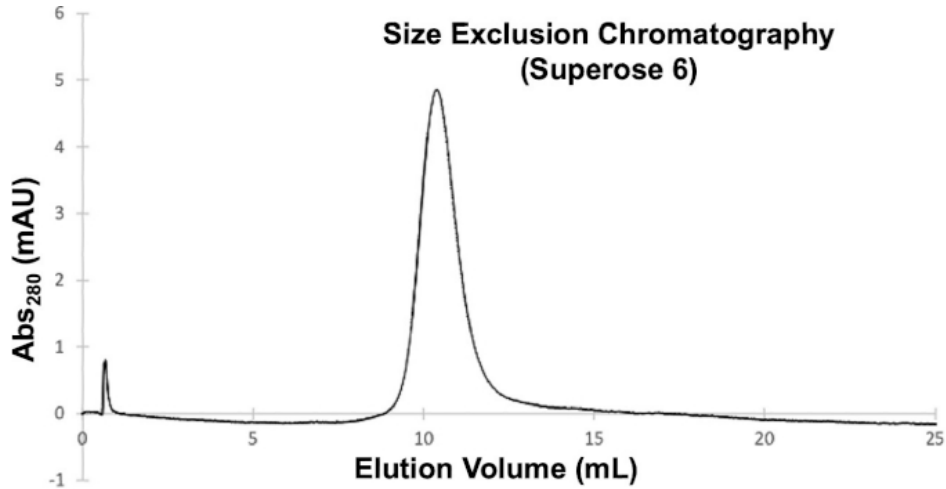
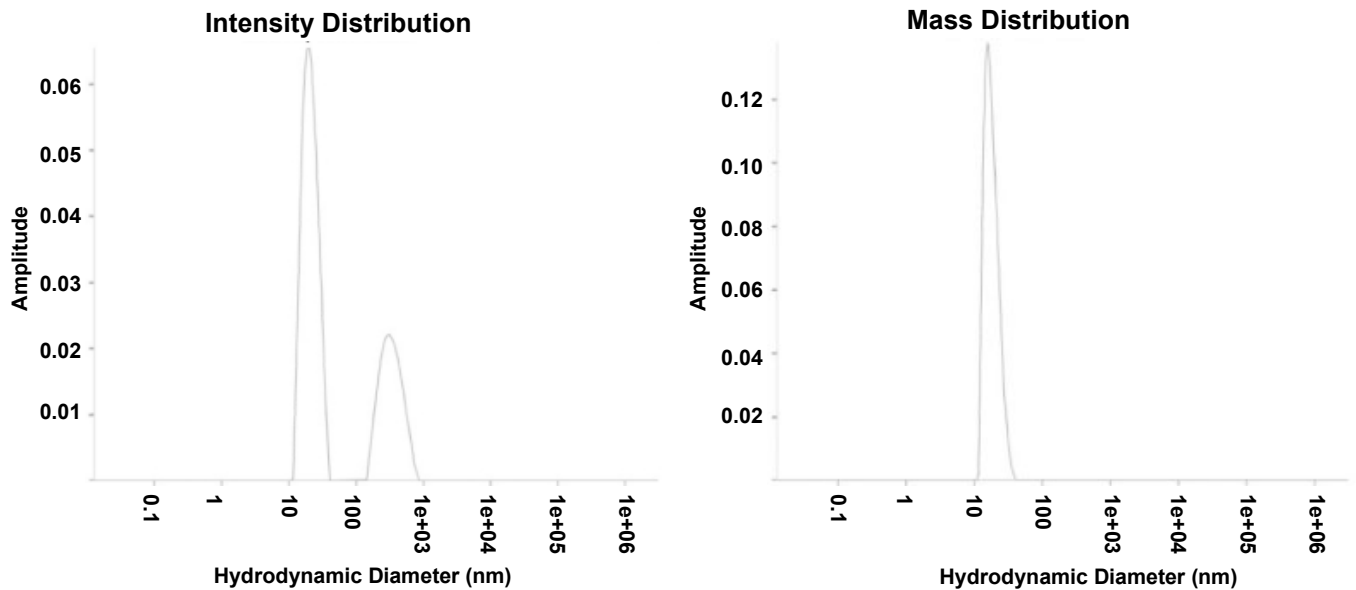


Figure 3: Dynamic Light Scattering Analysis



/Heather Couch/
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29 JUN 2020

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