

**Spike Glycoprotein (Stabilized) from SARS-Related Coronavirus 2, Wuhan-Hu-1 with C-Terminal Histidine Tag, Recombinant from HEK293 Cells**

**Catalog No. NR-53257**

This reagent is the 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: [YP\\_009724390](#)) was produced in human embryonic kidney HEK293 cells, purified by immobilized metal affinity chromatography and dialyzed into buffer. NR-53257 contains a cleaved N-terminal mu-phosphatase signal sequence and 1198 residues (ectodomain) of the SARS-CoV-2 spike glycoprotein; the recombinant protein is stabilized by substitution at the furin S1/S2 cleavage site (RRAR to GSAS; residues 682 to 685) and stabilizing mutations (K986P and V987P, wild type numbering) and includes a C-terminal tobacco etch virus (TEV)-cleavage site, glycine-serine linker, T4 foldon trimerization domain and octa-histidine tag.

**Lot: 70036058**

**Manufacturing Date: 19MAY2020**

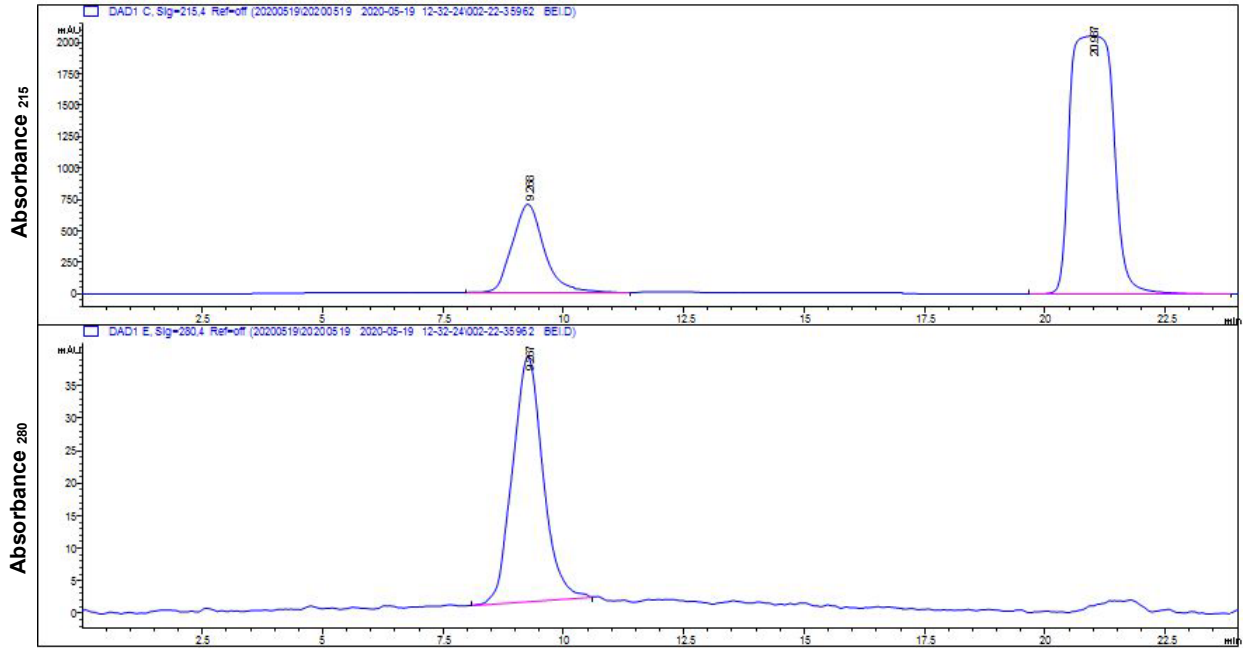
TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Clear solution, no particles present	Clear solution, no particles present
<b>Purity</b> SDS-PAGE analysis  SEC-HPLC	Protein band of interest represents > 90% of total staining intensity Report results	Dominant band of ~ 185 kDa represents > 95% of total staining intensity (Figure 1) <sup>1</sup> Peak observed at expected retention time; No aggregate or degradation observed (Figure 2)
<b>Protein Concentration (A<sub>280</sub>)</b>	Report results	0.77 mg per mL
<b>Final Product</b> Amount per vial Volume per vial	Report results Report results	250 µg 324 µL
<b>Negative Stain Electron Microscopy</b>	Report results	Well-folded sample with some background protein present (Figure 3)
<b>Endotoxin</b>	Report results	2.4 EU per mg

<sup>1</sup>Test was performed prior to freeze/thaw. 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.

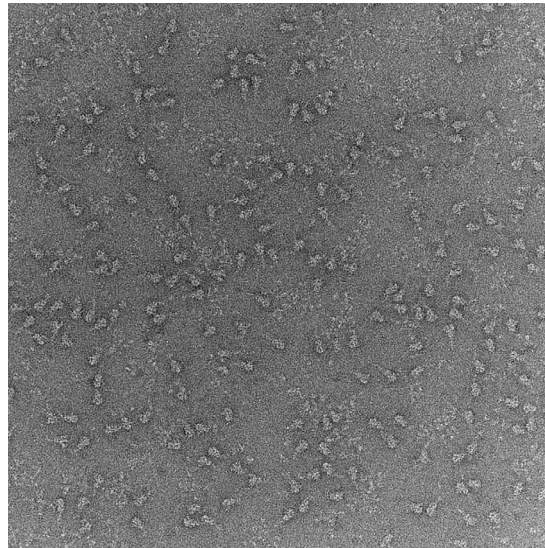
**Figure 1: SDS-PAGE Analysis**



**Figure 2: SEC-HPLC**



**Figure 3: Negative Stain Electron Microscopy**



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