

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

**Catalog No. NR-52308**

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 SF9 insect cells using a baculovirus expression system and purified by nickel affinity chromatography. NR-52308 lacks the signal sequence and contains 1196 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: [QHD43416](#)) and includes a thrombin cleavage site, T4 foldon trimerization domain and C-terminal hexa-histidine tag.

**Lot: 70035997**

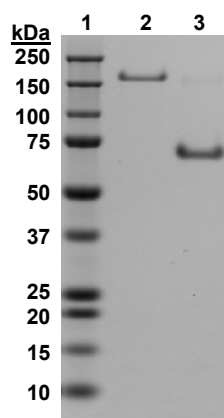
**Manufacturing Date: 30JUN2020**

TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Clear and colorless	Clear and colorless
<b>SDS-PAGE Analysis (Coomassie Blue)</b>	Protein band of interest represents > 90% of total staining intensity	Protein band of ~ 170 kDa represents > 90% of total staining intensity (Figure 1) <sup>1</sup>
<b>Concentration by Bicinchoninic Acid Assay</b> Bovine Serum Albumin (standard)	Report results	0.22 mg per mL
<b>Final Product</b> Amount per vial Volume per vial	Report results Report results	27 µg 125 µL
<b>Functional Activity by Western Blot Analysis</b> Monoclonal anti-histidine tag	Reactive	Reactive (Figure 2) <sup>2</sup>
<b>Sterility</b>	0.22 µm sterile-filtered	0.22 µm sterile-filtered

<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.

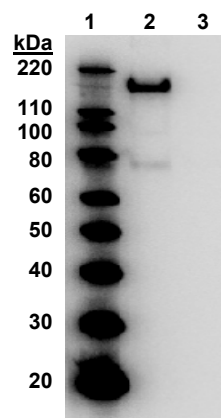
<sup>2</sup>Using a 1:1000 dilution of mouse monoclonal anti-histidine tag (R&D Systems MAB050) as primary antibody and a 1:1000 dilution of HRP-conjugated goat anti-mouse IgG (R&D Systems HAF007) as secondary antibody.

**Figure 1: SDS-PAGE Analysis**



Lane 1: Precision Plus Protein™ Standard (6 µL)  
Lane 2: NR-52308 (1 µg)  
Lane 3: Bovine serum albumin (1 µg)

**Figure 2: Anti-Histidine Western Blot Analysis**



Lane 1: MagicMark™ XP Protein Standard (5 µL)  
Lane 2: NR-52308 (0.2 µg)  
Lane 3: Bovine serum albumin (0.2 µg)

/Heather Couch/

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17 JUL 2020

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