

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: 70034410

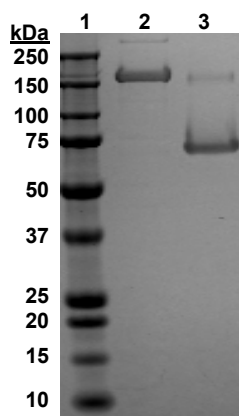
Manufacturing Date: 06MAY2020

TEST	SPECIFICATIONS	RESULTS
Appearance	Clear and colorless	Clear and colorless
SDS-PAGE Analysis (Coomassie Blue)	Protein band of interest represents > 90% of total staining intensity	Protein band of ~ 170 kDa represents > 90% of total staining intensity (Figure 1) ¹
Protein Concentration by Bradford Assay Bovine Serum Albumin (standard)	Report results	0.10 mg per mL
Final Product Amount per vial Volume per vial	Report results Report results	25 µg 250 µL
Functional Activity by Western Blot Analysis Monoclonal anti-histidine tag	Reactive	Reactive (Figure 2) ²
Sterility	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.

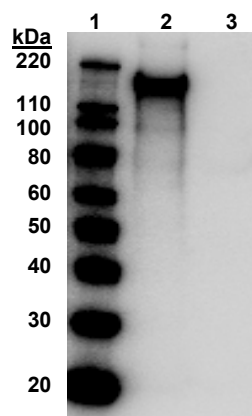
²Using a 1:1000 dilution of mouse monoclonal anti-histidine tag (R&D Systems MAB050) as primary antibody and a 1:1000 dilution of HRP-conjugated goat anti-mouse IgG (R&D Systems HAF007) as secondary antibody.

Figure 1: SDS-PAGE Analysis



Lane 1: Precision Plus Protein™ Standard (5 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/
Heather Couch

15 MAY 2020

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