

**Spike Glycoprotein (Stabilized) from SARS-Related Coronavirus 2, Wuhan-Hu-1 with C-Terminal Histidine and Twin-Strep® Tags, Recombinant from HEK293 Cells**

**Catalog No. NR-52724**

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: [QHD43416](#)) was produced by transient transfection of the plasmid VRC7471 into human embryonic kidney HEK293 (Expi293F™) cells, purified by immobilized metal affinity and StrepTactin™ Sepharose® chromatography, and dialyzed into phosphate buffered saline (PBS; pH 7.0). NR-52724 lacks the signal sequence and contains 1194 residues (ectodomain) of the SARS-CoV-2 spike 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), and includes a T4 foldon trimerization domain, HRV3C protease cleavage site, and C-terminal octa-histidine and Twin-Strep® (TST) tags.

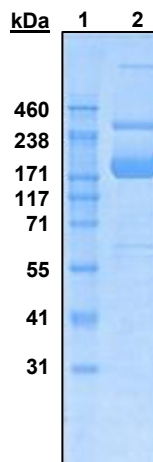
**Lot: 70037503**

**Manufacturing Date: 20JUN2020**

TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Clear and colorless	Clear and colorless
<b>SDS-PAGE Analysis</b>	Protein band of interest represents > 90% of total staining intensity	Dominant band of ~ 190 kDa represents ≥ 95% of total staining intensity (Figure 1) <sup>1</sup>
<b>Protein Concentration (A<sub>280</sub>)</b>	Report results	0.28 mg per mL
<b>Final Product</b> Amount per vial Volume per vial	Report results Report results	28 µg 100 µL
<b>Filtration</b>	0.22 µm sterile-filtered	0.22 µm sterile-filtered
<b>Endotoxin</b>	Report results	3.87 U per mL

<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*, 2005; 333(1): 73-83. PubMed: 16122388.

**Figure 1: SDS-PAGE Analysis**



Lane 1: HiMark™ Pre-stained Protein Standard (ThermoFisher LC5699; 10 µL)  
Lane 2: NR-52724 (2.5 µg)

/Heather Couch/

Heather Couch

17 JUL 2020

Program Manager or designee, ATCC Federal Solutions

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected by the contributor to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

ATCC® is a trademark of the American Type Culture Collection.  
You are authorized to use this product for research use only. It is not intended for human use.

