

Spike Glycoprotein Receptor Binding Domain (RBD) from SARS-Related Coronavirus 2, K417N/E484K/N501Y Variant with C-Terminal Histidine Tag, Recombinant from HEK293 Cells

Catalog No. NR-55414

ACROBiosystems Catalog No. SPD-C52Hp

Product Description:

A recombinant form of the spike (S) glycoprotein receptor binding domain (RBD) from severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), K417N/E484K/N501Y variant was produced by transient transfection in human embryonic kidney HEK293 cells and purified by affinity chromatography and buffer exchange. NR-55414 lacks the signal sequence, contains 219 residues of the SARS-CoV-2 S glycoprotein (amino acid residues R319 to K537) and features a C-terminal poly-histidine tag. NR-55414 is a variant of SARS-CoV-2 which contains the K417N, E484K and N501Y mutations in the S glycoprotein as compared to the SARS-CoV-2 reference sequence (GenPept: [QHD43416](#)). NR-55414 lot 4368-211MF1-VA was lyophilized from 165 µL bulk protein in phosphate-buffered saline, pH 7.4 with 10% trehalose.

Lot: 4368-211MF1-VA

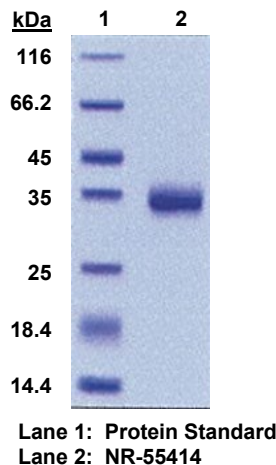
Receipt Date: 13MAY2021

TEST	SPECIFICATIONS	RESULTS
Appearance	White powder	White powder
Purity SDS-PAGE Analysis Gel filtration (SEC-MALS)	Protein band of interest represents > 95% of total staining intensity > 90% at appropriate molecular weight	Dominant band of ~ 35 kDa represents > 95% of total staining intensity (Figure 1) ¹ 94.93% at 33.53 kDa ¹
Final Product Amount per vial	Report results	100 µg
Functional Activity by ELISA	Reactive	Reactive ²
Filtration	0.2 µm sterile-filtered	0.2 µm sterile-filtered
Endotoxin Content (Limulus Amoebocyte Lysate Assay)	< 1.0 EU per µg	< 1.0 EU per µg

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 1 µg per mL of immobilized NR-55414 can bind human ACE2, Fc tag (ACROBiosystems AC2-H5257) with a linear range of 0.2 to 3 ng per mL

Figure 1: SDS-PAGE Analysis



/Heather Couch/

Heather Couch

30 JUN 2021

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.

