Product Information Sheet for NR-55397

Spike Glycoprotein Receptor Binding Domain (RBD) from SARS-Related Coronavirus 2, V367F Variant with C-Terminal Histidine Tag, Recombinant from HEK293 Cells

Catalog No. NR-55397
ACROBiosystems Catalog No. SPD-S52H4

For research use only. Not for use in humans.

Contributor and Manufacturer:
ACROBiosystems, Newark, Delaware, USA

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), V367F variant was produced in human embryonic kidney HEK293 cells and purified.[1] NR-55397 lacks the signal sequence, contains 223 residues of the SARS-CoV-2 spike glycoprotein RBD (amino acid residues R319 to F541) and features a C-terminal poly-histidine tag. NR-55397 is a variant of SARS-CoV-2 which contains the V367F mutation in the S glycoprotein RBD as compared to the SARS-CoV-2 reference sequence (GenPept: QHD43416).[1,2] NR-55397 has a theoretical molecular weight of 27,000 daltons. The predicted protein sequence is shown in Figure 1.

Material Provided:
Each vial contains approximately 100 µg of purified recombinant protein lyophilized in phosphate-buffered saline, pH 7.4 and 10% trehalose.

Packaging/Storage:
NR-55397 was packaged aseptically in glass vials. The product is provided lyophilized and should be placed in a closed, dry environment with desiccants and stored at -20ºC or colder immediately upon arrival. A frost-free freezer should be avoided since changes in moisture and temperature may affect protein stability.

Functional Activity:
NR-55397 is functional in ELISA, binding assays, and flow cytometry.[1]

Reconstitution:
NR-55397 should be reconstituted with 167 µL sterile deionized water to a stock solution of 600 µg/mL. Add water at room temperature with occasional gentle mixing. Carrier protein [e.g,. 0.1% (w/v) bovine serum albumin] must be included in the reconstitution buffer if the final protein concentration is lower than recommended or NR-55397 is aliquoted to less than 10 µg per vial. Note: Avoid vigorous shaking or vortexing.

Storage of Reconstituted Protein:
Reconstituted NR-55397 should be stored at -70°C or colder immediately and used within 3 months. Avoid repeated freeze-thaw cycles.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Spike Glycoprotein Receptor Binding Domain (RBD) from SARS-Related Coronavirus 2, V367F Variant with C-Terminal Histidine Tag, Recombinant from HEK293 Cells, NR-55397."

Biosafety Level: 1
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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References:

1. Chen, J., Personal Communication.
2. Wu, F., et al. "A New Coronavirus Associated with Human Respiratory Disease in China." Nature 579 (2020): 265-269. PubMed: 32015508.

Support Provided by NIAID

Figure 1: Predicted Protein Sequence

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1     RVQPTESIVR FPNITNLCPF GEVFNATRFA SVYAWNRKRI SNCVADYSFL
51    YNSASFSTFK CYGVSPTKLN DLCFTNVYAD SFVIRGDEVR QIAPGQTGKI
101   ADYNYKLPDD FTGCVIAWNS NNLDSKVGGN YNYLYRLFRK SNLKPFERDI
151   STEIYQAGST PCNGVEGFNC YFPLQSYGFQ PTNGVGYQPY RVVVLSFELL
201   HAPATVCGPK KSTNLVKNKC VNFGGGSGGG SHHHHHHHHH H
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S protein RBD – Residues 1 to 223 [represents amino acid residues 319 to 541 of the native S protein (GenPept: QHD43416)]
V367F mutation – **Residue 49**
Linker – Residues 224 to 231
Poly-histidine tag – Residues 232 to 241

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