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SUPPORTING INFECTIOUS DISEASE RESEARCH

# Certificate of Analysis for NR-55426

## Vector paH Containing Respiratory Syncytial Virus A2 (RSV A2), Recombinant Fusion Glycoprotein dFP, Gene (Postfusion)

## Catalog No. NR-55426

## Product Description:

NR-55426 is an expression vector encoding Respiratory Syncytial Virus A2 (RSV A2), recombinant postfusion F glycoprotein variant. The protein construct consists of synthesized, mammalian codon-optimized RSV F, [residues 1 to 513 with fusion peptide residues 137 to 146 deleted (dFP)] with a C-terminal human rhinovirus (HRV) 3C site, octa-histidine tag, and Strep-tag®II.[1] The RSV F variant is derived from A2 strain (GenPept: P03420) with three naturally occurring substitutions (P102A, I379V and M447V) for enhanced protein expression.[1,2] NR-55426 contains the beta-lactamase gene, *bla*, to provide transformant selection through ampicillin resistance in *Escherichia coli (E. coli)*. The deposited plasmid was transformed into One Shot™ TOP10 *Escherichia coli* (Invitrogen™ C404003), grown in LB broth with ampicillin (100 µg/mL) for 1 day at 37°C in an aerobic atmosphere, extracted using a Plasmid *Plus* Maxi Kit (QIAGEN® 12963) and vialed in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0).

**Lot: 70059263** **Manufacturing Date: 08MAR2023**

| TEST | SPECIFICATIONS | RESULTS |
|---|---|---|
| **Next-Generation DNA Sequencing (pre-vial)** | ~ 6140 base pairs | 6045 base pairs |
| **Genotypic Analysis**<br>Sequencing of F glycoprotein dFP insert (~ 1600 base pairs) | ≥ 99% sequence identity to depositor's sequence | 100% sequence identity to depositor's sequence |
| **Antibiotic Resistance**<br>Ampicillin (encoded by beta-lactamase gene *bla*) | *bla* sequence present | *bla* sequence present |
| **Concentration by Qubit Fluorometer®** | ≥ 2 µg/mL | 4 µg in 100 µL/vial (40 µg/mL) |
| **Amount per Vial** | Report results | 4 µg/vial |
| **$OD_{260}/OD_{280}$ Ratio** | 1.7 to 2.1 | 1.9 |
| **Effective Bacterial Transformation**<br>Invitrogen™ One Shot™ TOP10 *E. coli* | ≥ 50 colonies/ng | 270 colonies/ng |

[1]The sequence was assembled pre-vial using the depositor's predicted sequence as the reference sequence. *De novo* assembly was performed.

/Sonia Bjorum Brower/
Sonia Bjorum Brower 28 NOV 2023
Technical Manager or designee, ATCC Federal Solutions

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