

Vector pCAGGS Containing the SARS-Related Coronavirus 2, Wuhan-Hu-1 Spike Glycoprotein Gene

Catalog No. NR-52310

This reagent is the tangible property of the U.S. Government.

Product Description:

NR-52310 expresses the full-length, unmodified S glycoprotein, and is intended for producing pseudotyped particles/pseudovirions. NR-52310 is not intended for recombinant protein expression. The vector for the spike (S) glycoprotein gene from severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), Wuhan-Hu-1 (GenBank: [MN908947](#)) was designed by codon optimizing the full-length S sequence for mammalian expression and subcloning into the pCAGGS mammalian expression vector. NR-52310 contains the beta-lactamase gene, *bla*, to provide transformant selection through ampicillin resistance in *Escherichia coli* (*E. coli*). Lot 70036316 was produced from a preparation of glycerol stock (NRC-52310 lot 70033698), grown in Luria-Bertani broth with ampicillin (50 µg per mL) for 1 day at 37°C in an aerobic atmosphere, extracted using a Plasmid *Plus* Maxi Kit (QIAGEN® 12963) and vialled in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0).

Lot: 70036316

Manufacturing Date: 28MAY2020

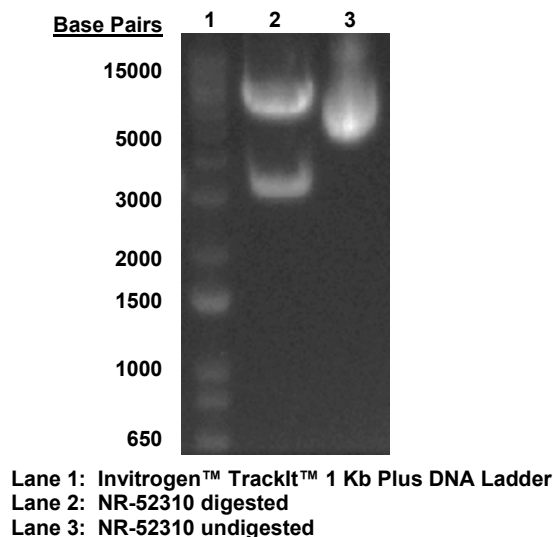
TEST	SPECIFICATIONS	RESULTS
Next-Generation DNA Sequencing ¹	~ 8580 base pairs	8585 base pairs
Genotypic Analysis ¹ Sequencing of S glycoprotein insert (~ 3820 base pairs)	≥ 99% sequence identity to depositor's sequence	100% sequence identity to depositor's sequence
Antibiotic Resistance ¹ Ampicillin (encoded by beta-lactamase gene <i>bla</i>) ²	<i>bla</i> sequence present	<i>bla</i> sequence present
Agarose Gel Electrophoresis Digestion with <i>ScaI</i>	~ 3 kb and ~ 6 kb	~ 3 kb and ~ 6 kb (Figure 1)
Concentration by Picogreen® Measurement	≥ 2 µg/mL	0.6 µg in 100 µL per vial (5.6 µg/mL)
Amount per Vial	Report results	0.6 µg per vial
OD ₂₆₀ /OD ₂₈₀ Ratio (pre-vial)	1.7 to 2.1	1.9
Effective Bacterial Transformation Invitrogen™ One Shot™ TOP10 <i>E. coli</i>	≥ 50 colonies per ng	248 colonies per ng

¹This test was performed pre-vial on a previous lot of extracted material (NR-52310 lot 70033697).

²The antibiotic ampicillin degrades quickly during growth. Bacterial stationary phase should be minimized during plasmid expansion to avoid plasmid loss and increased antibiotic concentrations may be necessary.

Certificate of Analysis for NR-52310

Figure 1: Agarose Gel of Undigested and Restriction Enzyme Digested NR-52310



/Heather Couch/
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11 JUN 2020

Program Manager or designee, ATCC Federal Solutions

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