

**Vector VRC4793 Containing the Human Anti-Middle East Respiratory Syndrome Coronavirus Spike Monoclonal Antibody CDC2-C2 Kappa Chain Gene**

**Catalog No. NR-52021**

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

**Product Description:**

NR-52021 is an expression vector containing a 711 base pair (VL+CL) insert that encodes a human anti-Middle East respiratory syndrome coronavirus (MERS-CoV) spike (S) monoclonal antibody CDC2-C2 kappa chain gene. The vector contains regulatory elements CMV enhancer/promoter, CMV IE splicing acceptor and HTLV-1 R region/splicing donor. Human Ig kappa chain leader is provided as the targeting sequence. The kanamycin resistance gene, *aph*, provides transformant selection through kanamycin resistance in *Escherichia coli* (*E. coli*). The deposited plasmid was transformed into One Shot™ TOP10 *E. coli* (Invitrogen™ C404003), grown in Luria-Bertani broth with kanamycin (50 µg per mL) for 1 day at 37°C in an aerobic atmosphere, extracted using a Plasmid Plus Maxi Kit (QIAGEN® 12963) and viald in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0).

**Lot: 70047563**

**Manufacturing Date: 25OCT2021**

TEST	SPECIFICATIONS	RESULTS
<b>Next-Generation DNA Sequencing</b>	~ 5100 base pairs	5126 base pairs <sup>1</sup>
<b>Genotypic Analysis</b> Anti-MERS-CoV spike monoclonal antibody CDC2-C2 kappa chain gene (~ 717 base pairs)	≥ 99% sequence identity to depositor's sequence	100.0% sequence identity to depositor's sequence
<b>Antibiotic Resistance</b> Kanamycin (encoded by <i>aph</i> )	<i>aph</i> sequence present	<i>aph</i> sequence present
<b>Concentration by Qubit Fluorometer®</b>	≥ 2 µg/mL	0.4 µg in 20 µL per vial (21.6µg/mL)
<b>Amount per Vial</b>	Report results	0.4 µg per vial
<b>OD<sub>260</sub>/OD<sub>280</sub> Ratio</b>	1.7 to 2.1	1.9
<b>Effective Bacterial Transformation</b> Invitrogen™ One Shot™ TOP10 <i>E. coli</i>	≥ 50 colonies per ng	129 colonies per ng

<sup>1</sup>The sequence was assembled pre-vial using the depositor's predicted sequence as the reference sequence. The complete plasmid sequence and map are provided on the BEI Resources webpage.

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