

**Vector VRC4234 Containing the Macaque Anti-Middle East Respiratory Syndrome Coronavirus Spike Monoclonal Antibody JC57-14 Heavy Chain Gene**

**Catalog No. NR-52024**

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

**Product Description:**

NR-52024 is an expression vector containing a 1416 base pair (VH+CH) insert that encodes a macaque anti-Middle East respiratory syndrome coronavirus (MERS-CoV) spike (S) monoclonal antibody JC57-14 heavy chain gene. The vector contains the regulatory elements CMV enhancer/promoter, CMV IE splicing acceptor and HTLV-1 R region/splicing donor. The macaque Ig heavy 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 vialled in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0).

**Lot: 70047569**

**Manufacturing Date: 18OCT2021**

TEST	SPECIFICATIONS	RESULTS
Next-Generation DNA Sequencing	~ 5800 base pairs	5833 base pairs <sup>1</sup>
<b>Genotypic Analysis</b> Anti-MERS-CoV spike monoclonal antibody JC57-14 heavy chain gene (~ 1420 base pairs)	≥ 99% sequence identity to depositor's sequence	100% 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	1.2 µg in 40 µL per vial (30.0 µg/mL)
<b>Amount per Vial</b>	Report results	1.2 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	160 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.

/Sonia Bjorum Brower/

Sonia Bjorum Brower

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Technical Manager or designee, ATCC Federal Solutions

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