Certificate of Analysis for NR-52022

Vector VRC4230 Containing the Macaque Anti-Middle East Respiratory Syndrome Coronavirus Spike Monoclonal Antibody JC57-13 Heavy Chain Gene

Catalog No. NR-52022

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

Product Description:

NR-52022 is an expression vector containing a 1476 base pair (VH+CH) insert that encodes a macaque anti-Middle East respiratory syndrome coronavirus (MERS-CoV) spike (S) monoclonal antibody JC57-13 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 vialed in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0).

Lot: 70047565 **Manufacturing Date: 25OCT2021**

TEST	SPECIFICATIONS	RESULTS
Next-Generation DNA Sequencing	~ 5800 base pairs	5845 base pairs[1]
Genotypic Analysis Anti-MERS-CoV spike monoclonal antibody JC57-13 heavy chain gene (~ 1476 base pairs)	≥ 99% sequence identity to depositor's sequence	100.0% sequence identity to depositor's sequence
Antibiotic Resistance Kanamycin (encoded by *aph*)	*aph* sequence present	*aph* sequence present
Concentration by Qubit Fluorometer®	≥ 2 µg/mL	0.69 µg in 30 µL per vial (22.9 µg/mL)
Amount per Vial	Report results	0.69 µg per vial
OD_{260}/OD_{280} Ratio	1.7 to 2.1	1.9
Effective Bacterial Transformation Invitrogen™ One Shot™ TOP10 *E. coli*	≥ 50 colonies per ng	122 colonies per ng

[1]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/
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Technical Manager or designee, ATCC Federal Solutions

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Support Provided by NIAID

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