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SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for NR-52029

Vector VRC4820 Containing the Murine Anti-Middle East Respiratory Syndrome Coronavirus Spike Monoclonal Antibody G2 Light Chain Gene

Catalog No. NR-52029

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

Product Description:

NR-52029 is an expression vector containing an approximately 720 base pair insert (VL+CL) that encodes a murine anti-Middle East respiratory syndrome coronavirus (MERS-CoV) spike (S) monoclonal antibody G2 light chain gene. The vector contains regulatory elements CMV enhancer/promoter, CMV IE splicing acceptor and HTLV-1 R region/splicing donor. Murine Ig light 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: 70047579 **Manufacturing Date: 18OCT2021**

TEST	SPECIFICATIONS	RESULTS
Next-Generation DNA Sequencing	~ 5130 base pairs	5130 base pairs[1]
Genotypic Analysis Anti-MERS - CoV spike monoclonal antibody G2 light chain gene (~ 720 base pairs)	≥ 99% sequence identity to depositor's sequence	99.9% sequence identity to depositor's sequence[2]
Antibiotic Resistance Kanamycin (encoded by *aph*)	*aph* sequence present	*aph* sequence present
Concentration by Qubit Fluorometer®	≥ 2 µg per mL	0.8 µg in 60 µL per vial (13.4 µg per mL)
Amount per Vial	Report results	0.8 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	134 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.
[2]Comparison to the depositor's sequence indicates there are three SNPs, two of which are within the plasmid insert, t1432g and t2094a. These result in silent mutations.

/Sonia Bjorum Brower/
Sonia Bjorum Brower 27 JUL 2022
Technical Manager or designee, ATCC Federal Solutions

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected by ATCC® and the contributor to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

Support Provided by NIAID

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