

Vector pET-11a Containing the SARS-Related Coronavirus 2, Wuhan-Hu-1 Non-Structural Protein 7 Gene

Catalog No. NR-52432

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Product Description:

The non-structural protein 7 (nsp7) from severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), Wuhan-Hu-1 (GenBank: [MN908947](#)) was codon optimized, tagged with a tobacco etch virus (TEV) cleavable N-terminal hexa-histidine tag and cloned into the pET-11a plasmid. The beta-lactamase gene, *bla*, provides transformant selection through ampicillin 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 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: 70035134

Manufacturing Date: 13MAY2020

| TEST | SPECIFICATIONS | RESULTS |
|--|---|--|
| Next-Generation DNA Sequencing | Report results | 5995 base pairs ¹ |
| Genotypic Analysis Sequencing of nsp7 insert (~ 350 base pairs) | 100% sequence identity to depositor's sequence His ₆ tag sequence confirmed TEV protease site sequence confirmed | 100% sequence identity to depositor's sequence ² His ₆ tag sequence confirmed TEV protease site sequence confirmed |
| Antibiotic Resistance Ampicillin (encoded by beta-lactamase gene <i>bla</i>) ³ | <i>bla</i> sequence present | <i>bla</i> sequence present |
| Concentration by PicoGreen® Measurement | ≥ 2 µg/mL | 0.1 µg in 20 µL per vial (7 µg/mL) |
| Amount per Vial | Report results | 0.1 µg per vial |
| OD₂₆₀/OD₂₈₀ Ratio | 1.7 to 2.1 | 1.8 |
| Effective Bacterial Transformation Invitrogen™ One Shot™ TOP10 <i>E. coli</i> | ≥ 50 colonies per ng | > 500 colonies per ng |

¹The sequence was assembled pre-vial using the predicted sequence as the reference sequence. The complete plasmid sequence and map are provided on the BEI Resources webpage.

²The NR-52432 insert was codon optimized but is 100% identical with the SARS-CoV-2, Wuhan-Hu-1 NSP7 protein (GenPept: YP_009725303.1).

³The 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.

/Heather Couch/
Heather Couch

10 JUN 2020

Program Manager or designee, ATCC Federal Solutions

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