



Certificate of Analysis for HRP-20057

Simian-Human Immunodeficiency Virus Infectious Molecular Clone
 SHIV.BG505.332N.375Y.dCT

Catalog No. HRP-20057

Product Description:

HRP-20057 is a full-length molecular clone of infectious and replication-competent simian-human immunodeficiency provirus. This clone contains an amino acid residue at Env position 375 that supports virus entry and replication in primary rhesus CD4 T cells. BG505.332N.375S represents wildtype BG505 (GenBank: [KU958484](#)) env sequence with the 332 glycan knocking-in mutation T332N. SHIV.BG505.332N.375Y.dCT is an isogenic mutant of SHIV.BG505.332N.375S.dCT generated by changing wildtype BG505 Env375 residue from Ser to Tyr. SHIV.BG505.332N.375Y.dCT showed increased infectivity and replication kinetics *in vitro* in Indian rhesus macaque CD4⁺ T cells and *in vivo* in Indian rhesus macaques. The plasmid encodes full-length, replication-competent SHIV in a [pCR-XL-TOPO](#) backbone. The kanamycin resistance gene, *aph*, provides transformant selection through kanamycin resistance in *Escherichia coli* (*E. coli*). The resulting size of the plasmid is approximately 13,910 base pairs. The purified plasmid DNA was provided vialled in TE buffer (10 mM Tris-HCl, 1 mM EDTA).

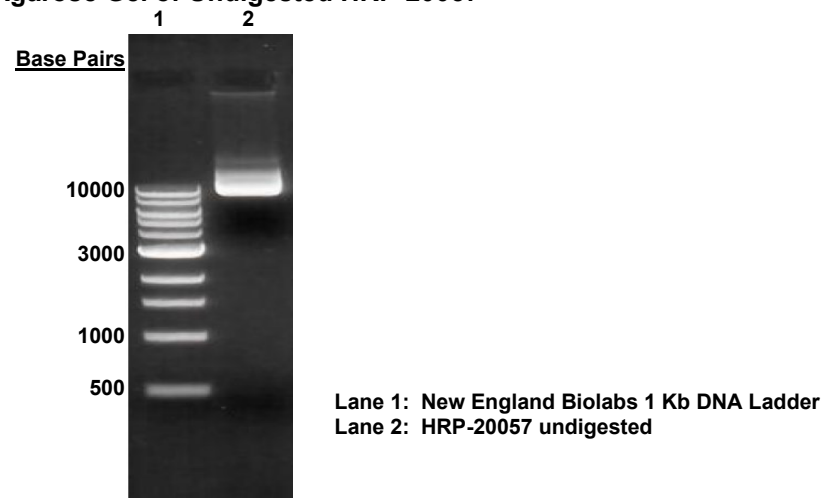
Lot: 70046700

Receipt Date: 15SEP2021

TEST	SPECIFICATIONS	RESULTS
Next-Generation DNA Sequencing	Report results	~ 13,910 base pairs ¹
Genotypic Analysis Sequencing of BG505.332N.375Y insert (~ 10,510 base pairs)	≥ 99% sequence identity to depositor's sequence	100% sequence identity to depositor's sequence
Antibiotic Resistance Kanamycin (encoded by kanamycin gene <i>aph</i>)	<i>aph</i> sequence present	<i>aph</i> sequence present
Agarose Gel Electrophoresis Undigested	~ 10 kb band	~ 10 kb band (Figure 1)
Concentration by NanoDrop® Measurement	Report results	1 µg in 100 µL per vial (0.01 mg per mL)
Amount per Vial	Report results	1 µg per vial
OD ₂₆₀ /OD ₂₈₀ Ratio	1.7 to 2.1	1.92

¹The depositor's complete plasmid sequence and map are provided on the NIH HIV Reagent Program webpage.

Figure 1: Agarose Gel of Undigested HRP-20057





**HIV REAGENT
PROGRAM**

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/Ken Crawford/

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27 JUN 2022

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