

## Simian-Human Immunodeficiency Virus Infectious Molecular Clone SHIV.ZM233.375Y.dCT

Catalog No. HRP-20052

### Product Description:

HRP-20052 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. SHIV.ZM233.375Y.dCT is an isogenic mutant of SHIV.ZM233.375S.dCT generated by changing wildtype ZM233 Env375 residue (GenBank: [MW410738](#)) from Ser to Tyr. SHIV.ZM233.375Y.dCT showed increased infectivity and replication kinetics *in vitro* in Indian rhesus macaque CD4<sup>+</sup> 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 13,850 base pairs. The purified plasmid DNA was provided vialled in TE buffer (10 mM Tris-HCl, 1 mM EDTA).

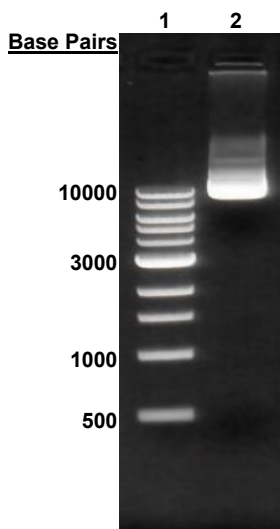
Lot: 70046695

Receipt Date: 29SEP2021

TEST	SPECIFICATIONS	RESULTS
Next-Generation DNA Sequencing	Report results	~ 13,850 base pairs <sup>1</sup>
<b>Genotypic Analysis</b> Sequencing of ZM233.375Y insert (~ 10,460 base pairs)	≥ 99% sequence identity to depositor's sequence	100% sequence identity to depositor's sequence
<b>Antibiotic Resistance</b> Kanamycin (encoded by kanamycin gene <i>aph</i> )	<i>aph</i> sequence present	<i>aph</i> sequence present
<b>Agarose Gel Electrophoresis</b> 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 <sub>260</sub> /OD <sub>280</sub> Ratio	1.7 to 2.1	1.90

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

Figure 1: Agarose Gel of Undigested HRP-20052



Lane 1: New England Biolabs 1 Kb DNA Ladder  
Lane 2: HRP-20052 undigested



**HIV REAGENT  
PROGRAM**

## Certificate of Analysis for HRP-20052

/Ken Crawford/  
Ken Crawford

Lead Technical Writer, ATCC Federal Solutions

28 APR 2022

ATCC<sup>®</sup>, on behalf of the NIH HIV Reagent Program, hereby represents and warrants that the material provided under this certificate has been subjected, by ATCC<sup>®</sup> 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<sup>®</sup>'s knowledge.

*ATCC<sup>®</sup> is a trademark of the American Type Culture Collection.*

*You are authorized to use this product for research use only. It is not intended for human use.*



**NIH HIV Reagent Program**

[www.hivreagentprogram.org](http://www.hivreagentprogram.org)

E-mail: [contact@HIVReagentProgram.org](mailto:contact@HIVReagentProgram.org)

Tel: 888-487-0727 | Fax: 703-365-2898

© 2022 American Type Culture Collection (ATCC)

All rights reserved.

HRP-20052\_70046695\_28APR2022

Page 2 of 2