

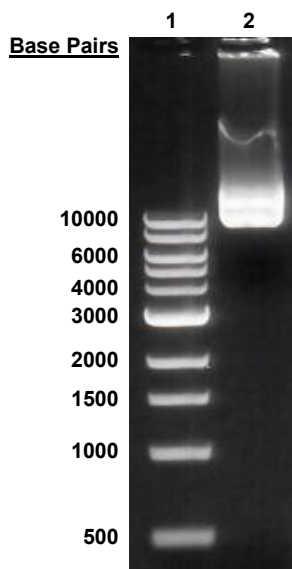
**Simian-Human Immunodeficiency Virus Infectious Molecular Clone SHIV.Q23.17.375H.dCT**
**Catalog No. HRP-20047**
**Product Description:**

HRP-20047 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.Q23.17.375H.dCT is an isogenic mutant of SHIV.Q23.17.375S.dCT generated by changing wildtype Q23.17 Env375 residue (GenBank: [MW410736](#)) from Ser to His. SHIV.Q23.17.375H.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 13,885 base pairs. The purified plasmid DNA was provided vialled in TE buffer (10 mM Tris-HCl, 1 mM EDTA).

**Lot: 70046690**
**Receipt Date: 28SEP2021**

TEST	SPECIFICATIONS	RESULTS
<b>Next-Generation DNA Sequencing</b>	Report results	~ 13,885 base pairs <sup>1</sup>
<b>Genotypic Analysis</b> Sequencing of Q23.17.375H insert (~ 10490 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)
<b>Concentration by NanoDrop® Measurement</b>	Report results	1 µg in 100 µL per vial (0.01 mg per mL)
<b>Amount per Vial</b>	Report results	1 µg per vial
<b>OD<sub>260</sub>/OD<sub>280</sub> Ratio</b>	1.7 to 2.1	1.91

<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-20047**


Lane 1: New England Biolabs 1 Kb DNA Ladder  
Lane 2: HRP-20047 undigested



**HIV REAGENT  
PROGRAM**

## Certificate of Analysis for HRP-20047

/Ken Crawford/  
Ken Crawford

*Lead Technical Writer, ATCC Federal Solutions*

12 APR 2022

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**NIH HIV Reagent Program**

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