

Certificate of Analysis for NR-45093

Synfluenza (Synthetic Influenza) Clone Set, Recombinant in *Escherichia coli*, Plate 4 (Hemagglutinin)

Catalog No. NR-45093

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

Product Description: Each synthetic hemagglutinin (HA) gene from NR-45093 was manufactured from seven individually-designed, double-stranded DNA construct cassettes produced by assembly of eight chemically-synthesized oligonucleotides using the Gibson AssemblyTM process. The seven cassettes were combined into the pSMART[®]-LCKan vector (Lucigen[®]) to establish gene segment clones in One Shot[®] TOP10 competent (InvitrogenTM) *Escherichia coli* (*E. coli*) cells.

Lot¹: 62123433 Manufacturing Date: 26SEP2013

TEST	SPECIFICATIONS	RESULTS
Presence of HA Insert Sequence ²	Confirmed	Confirmed
Viability	Report results	Growth confirmed

¹All quality control results were provided by J. Craig Venter Institute.

Date: 18 FEB 2014 Signature: (

Title: Technical Manager, BEI Authentication or designee

ATCC[®], on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests by the contractor 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.

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²All clones are reported to contain full length inserts