

***Trypanosoma cruzi*, Strain Brazil (+*luc*)**

Catalog No. NR-40347

Product Description:

Trypanosoma cruzi (*T. cruzi*), strain Brazil (+*luc*) is a transgenic clone derived from the Brazil strain, which was isolated from a human patient in Brazil. Strain Brazil (+*luc*) was deposited to BEI Resources as a luciferase-expressing strain in the trypomastigote stage of the parasite's life cycle. Luciferase was introduced via the pTREX-GFP plasmid where *luc* replaced GFP. NR-40347 was produced by cultivation of BEI Resources seed lot 61447873 in BS-C-1 monkey kidney epithelial cells (ATCC® CCL-26™) with Eagle's Minimum Essential Medium (EMEM) supplemented with 10% heat-inactivated fetal bovine serum (HIFBS) for 6 days at 37°C in an aerobic atmosphere with 5% CO₂ until emergence of trypomastigotes from host cells was observed to produce this lot.

Lot: 70038190

Manufacturing Date: 08SEP2020

TEST	SPECIFICATIONS	RESULTS
Cell Morphology¹ 3 days at 37°C in an aerobic atmosphere with 5% CO ₂ in EMEM supplemented with 10% HIFBS	Report results	Elongated and refractile
Genotypic Analysis² Sequencing of 18S ribosomal RNA gene (~ 800 base pairs) Sequencing of putative C-5 sterol desaturase gene (<i>TcSC5D</i>) (~ 730 base pairs)	Consistent with <i>T. cruzi</i> ≥ 99% sequence identity to <i>T. cruzi</i> Discrete Typing Unit (DTU) <i>T. cruzi</i> I (Tcl) (GenBank: JN050567.1)	Consistent with <i>T. cruzi</i> 99.2% sequence identity to <i>T. cruzi</i> DTU Tcl (GenBank: JN050567.1) ³
Functional Activity of Luciferase Gene^{1,4}	Positive	Positive
Viable Cell Count by Hemacytometry^{2,5}	> 10 ⁶ cells per mL	1.2 × 10 ⁷ cells per mL
Viability¹ 3 days at 37°C in an aerobic atmosphere with 5% CO ₂ in EMEM supplemented with 10% HIFBS	Growth	Growth
Sterility (21-day incubation)¹ Harpo's HTYE broth, 37°C and 26°C, aerobic ⁶ Trypticase soy broth, 37°C and 26°C, aerobic Sabouraud broth, 37°C and 26°C, aerobic DMEM with 10% FBS, 37°C, aerobic Sheep blood agar, 37°C, aerobic Sheep blood agar, 37°C, anaerobic Thioglycollate broth, 37°C, anaerobic	No growth No growth No growth No growth No growth No growth No growth	No growth No growth No growth No growth No growth No growth No growth
Mycoplasma Contamination¹ DNA Detection by PCR	None detected	None detected

¹Testing completed on vialled, post-freeze material.

²Testing completed on bulk material prior to vialing and freezing.

³Cosentino, R. O. and F. Agüero. "A Simple Strain Typing Assay for *Trypanosoma cruzi*: Discrimination of Major Evolutionary Lineages from a Single Amplification Product." *PLoS Negl. Trop. Dis.* 6 (2012): e1777. PubMed: 22860154.

⁴Luciferase activity was determined using the Luciferase Assay System (Promega E1500). Parasites were lysed and incubated with luciferase assay reagent. Luciferase activity was measured using a luminometer with a bioluminescence emission spectra of ~ 560 nm.

⁵Only trypomastigote-stage parasites were counted.

⁶Atlas, Ronald M. *Handbook of Microbiological Media*. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.

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