

Toxoplasma gondii, Strain ME49 FLUC

Catalog No. NR-59751

Product Description:

Toxoplasma gondii (*T. gondii*), strain ME49 FLUC (Δ hxgpt::FLUC) was deposited to BEI Resources as a transgenic luciferase-expressing reporter strain derived from the Type II strain ME49 originally isolated from a sheep in California, USA. NR-59751 was produced by cultivation of the deposited material in human foreskin fibroblast cells (ATCC® CRL-1634™) with Dulbecco's Minimal Essential Medium (DMEM) supplemented with 10% (v/v) heat-inactivated fetal bovine serum (HIFBS). The culture was propagated for 3 days at 37°C in an aerobic atmosphere with 5% CO₂ until lysis of the host cell monolayer was reached.

Lot: 70072155

Manufacturing Date: 07NOV2024

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis¹ Sequencing of 850 locus (~ 730 base pairs) Sequencing of uracil phosphoribosyltransferase (UPRT) intron 1 (~ 530 base pairs)	≥ 99% sequence identity to <i>T. gondii</i> , strain ME49 (GenBank: CM002039.1) ≥ 99% sequence identity to <i>T. gondii</i> , strain ME49 (GenBank: CM002046.1)	100% sequence identity to <i>T. gondii</i> , strain ME49 (GenBank: CM002039.1) (Figure 1) 100% sequence identity to <i>T. gondii</i> , strain ME49 (GenBank: CM002046.1) (Figure 2)
Phenotypic Analysis² Luciferase activity ³	Positive	Positive
Viable Cell Count by Hemacytometry¹	> 10 ⁶ cells per mL	3.9 × 10 ⁷ cells/mL
Viability² 7 days at 37°C in an aerobic atmosphere with 5% CO ₂ in DMEM supplemented with 10% HIFBS in human foreskin fibroblast cells (ATCC® CRL-1634™)	Growth	Growth
Sterility (14-day incubation)² Trypticase soy broth, 37°C and 26°C, aerobic Sabouraud broth, 37°C and 26°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
Mycoplasma Contamination² DNA Detection by PCR	None detected	None detected

¹Testing completed on bulk material prior to vialing and freezing.

²Testing completed on vialled, post-freeze material.

³Luciferase 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.

Figure 1: *T. gondii*, Strain ME49 FLUC – 850 Locus Sequence

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CCTCGTCCAG CCGATGCTGC ATGGCTGCCA CCCCTTCCTC GTAGCCCCCC TGTCGGTGAG GCAACTGGTC CCCGTGGGGT
CTTTGAAAGG CTC AACC GGG TACCCGGGCT ACGCGAAGGC GACCCCTTC CACGAGAAGG CCCTCCGACC TTATCGACGC
CCGTTGCCCC TGGCGGCGGC TTGCCATCGC TTCTGGATGT CGGCGCTGCT TTCCCTGGAG GCACCCCTGT TTGTGGGGAG
GAAGCAGTAG TGGTACTAAT GGGTGCCTGT GCCTGCCTCC CTCCTTGCTC CGGTGAGCTG CTGCCCCCA CAGGTCCCTC
TTGCTGCATG CCTCGTGCAG GAGCGCTTGG CGTCGGTGAG TCACCATCTG ACGGTGAAAC TGAGCTGTCTG CCCAAGCCGC
TGCTGCCTGA CGACGAAGAA GGCCACCTG AGTGGATTAT GACGACGTC CCCTCTGGCC CGCTTTCAGA GCCCACGAAA
AATGAAGCAA GACGCGGGCC TTGAGTGGG GACGGTGATG GCGGCGAACG TTTTCCGGGA ACGTGTGTTC CGATGTCTCT
TGTCGGGGAT GTTTCCTTTG GAAGCGAGCC CTTTGCGCCG CAGCACGGAC TTTGTGTGTC TGCTGGTACA AGGACAGTCT
CTGAAGGACT CCCCCTTGA GGTGTGGAAT GTAAAGGCC CTCTACGGGT TTCCCCCAG ATGCTGGAGA AGGTGGTGAT
CTGGAG
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Figure 2: *T. gondii*, Strain ME49 FLUC – UPRT Intron 1 Sequence

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CGACCAGGAA GAAAGCATTC TCCAGGACAT CATCACGAGG TAATCCTTCA ACCGAAGTTT GCTTTCGGTG ACTCTGCCTG
TTGGTTATAC TGGTGGCCT TCCCGTCTG CGGCCCCCTT TCCTCCGCTT GCTGTTTAAA TGCTCGTCTT CGTTTTCCTT
CCTGCCGCAT CCCCCTATAT TTTAAGGAGA GGGAAACAGG CGTGAGTTGG ACGGCATGAA AGTTCTCGGC CTGTATGCCG
GTTGTGGCGG TCGTTTGCAG ATTGCTTTTT TCTTCGAATC GGTGCTGTAA CCCTCGCGAA GAACGACGCT GCAAACGACT
TCTCGAACTC TCAGTCGTGT ACTTTACGTG CTTCTTTTCA GGGACCTCCC CCCGCGTTAC TCATTTGTAT TCACAGCTAC
GAAGTGTCTT GCAAGGTGGA TTTCTGCCAG GCTCCATGTC TCACTCGTTG CGTTTTCGGA AAAGTTCATT GTGAACGTTT
CCCTTGCGTG TCATGACTTT ATCAGGTTTC CCAATGTGGT GCTCATG
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