

***Ehrlichia chaffeensis*, Strain St. Vincent**

Catalog No. NR-46445

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

Product Description:

Ehrlichia chaffeensis (*E. chaffeensis*), strain St. Vincent was isolated in 1996 from the blood of a male patient in Georgia, USA, who was bitten by a tick and subsequently developed fatal human monocytic ehrlichiosis (HME). NR-46445 lot 70018415 was produced by infecting DH82 cells (ATCC® CRL-10389™) and incubating in Dulbecco's Modified Eagle's Medium containing 5% fetal bovine serum (ATCC® 30-2020™) and 2 mM L-glutamine for 12 days at 37°C with 5% CO₂. NR-46445 is provided in cell lysate and supernatant supplemented with 20% heat-inactivated fetal bovine serum and 10% DMSO.

Lot: 70018415

Manufacturing Date: 09APR2019

TEST	SPECIFICATIONS	RESULTS
Identification of Infectivity in DH82 Cells by Indirect Fluorescent Antibody (IFA) Assay¹	Fluorescence observed	Fluorescence observed
Genotypic Analysis Sequencing of ECH_0849 gene (~ 920 base pairs)	≥ 98% identity with <i>E. chaffeensis</i> , strain St. Vincent (GenBank: CP007478.1)	100% identity with <i>E. chaffeensis</i> , strain St. Vincent (GenBank: CP007478.1)
Titer by TCID₅₀ Assay in DH82 Cells by IFA^{1,2}	Report results	1.58 × 10 ⁵ TCID ₅₀ per mL in 19 days at 37°C with 5% CO ₂
Amplification of <i>E. chaffeensis</i> Sequence by PCR	~ 1000 base pair amplicon	~ 1000 base pair amplicon
Sterility (21-day incubation) Harpo's HTYE broth, 37°C and 26°C, aerobic ³ 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 DMEM with 10% FBS, 37°C and 5% CO ₂	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 Contamination Agar and broth culture (14-day incubation at 37°C) DNA detection by PCR of extracted Test Article nucleic acid	None detected None detected	None detected None detected

¹*Ehrlichia chaffeensis* IFA IgG reagent kit (Fuller Laboratories ECHG-120)

²The Tissue Culture Infectious Dose 50% (TCID₅₀) endpoint is the 50% infectious endpoint in cell culture. The TCID₅₀ is the dilution of organism that under the conditions of the assay can be expected to infect 50% of the culture vessels inoculated, just as a Lethal Dose 50% (LD₅₀) is expected to kill half of the animals exposed. A reciprocal of the dilution required to yield the TCID₅₀ provides a measure of the titer (or infectivity) of the organism preparation.

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

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