

Cryptococcus neoformans, Strain NIH306

Catalog No. NR-50332

Product Description: *Cryptococcus neoformans* (*C. neoformans*), strain NIH306 was isolated in San Gabriel, California in 1969 from human cerebrospinal fluid. **Note: The label incorrectly refers to NR-50332 as strain NIH-306 14508722. The correct strain name for NR-50332 is NIH306.**

Lot¹: 64362156

Manufacturing Date: 08AUG2016

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology ² Colony morphologies ² CGB agar characterization ³ <i>C. neoformans</i> , strain NIH306 (NR-50332) Positive control (<i>C. neoformans</i> ; ATCC [®] MYA-4564™) Negative control (<i>C. gattii</i> ; ATCC [®] MYA-4560™)	Report results Report results Yellow (no color change) Yellow (no color change) Blue	Circular yeast form cells, budding (Figure 1A) Colony type 1: (capsular) Circular, convex, entire margin, shiny, smooth and white (Figure 1B) Colony type 2: (acapsular) Circular, convex, entire margin, butyrous and translucent (Figure 1B) Yellow (no color change) Yellow (no color change) Blue
Genotypic Analysis Sequencing of partial 18S ribosomal RNA (rRNA) gene, internal transcribed spacer (ITS) 1, 5.8S rRNA gene, ITS 2, partial 26S rRNA (~ 520 base pairs) Sequencing of 28S rRNA gene (~ 620 base pairs) Confirmation of Serotype A (<i>C. neoformans</i> var. <i>grubii</i>)⁴ 28S ribosomal RNA gene, partial sequence; Intergenic spacer (IGS) 1, partial sequence (1310 base pairs) 5S rRNA gene (partial sequence) and IGS 2 (partial sequence) (~ 1110 base pairs)	≥ 99% sequence identity to <i>C. neoformans</i> type strain (GenBank: EU240005.1) ≥ 99% sequence identity to <i>C. neoformans</i> type strain (GenBank: KU729166.1) ≥ 97% sequence identity to <i>C. neoformans</i> var. <i>grubii</i> ≥ 97% sequence identity to <i>C. neoformans</i> var. <i>grubii</i>	99.4% sequence identity to <i>C. neoformans</i> type strain (GenBank: EU240005.1) 99.5% sequence identity to <i>C. neoformans</i> type strain (GenBank: KU729166.1) 98.5% sequence identity to <i>C. neoformans</i> var. <i>grubii</i> (GenBank: CP003821.1) 98% sequence identity to <i>C. neoformans</i> var. <i>grubii</i> (GenBank: EF211262.1)
Confirmation of Fluconazole Susceptibility⁵	Sensitive (MIC ≤ 8 µg/mL)	Sensitive (MIC = 6 µg/mL)
Purity⁶ Nutrient broth with 0.1% Yeast Extract at 25°C Nutrient broth with 0.1% Yeast Extract at 37°C	No bacterial growth No bacterial growth	No bacterial growth No bacterial growth
Viability (post-freeze)²	Growth	Growth

¹NR-50332 was produced by inoculation of the deposited material onto Yeast Mold slants and grown 2 days at 25°C in an aerobic atmosphere. Cells were harvested from the slants with 20% glycerol to produce this lot.

²5 days at 25°C in an aerobic atmosphere on Yeast Mold medium

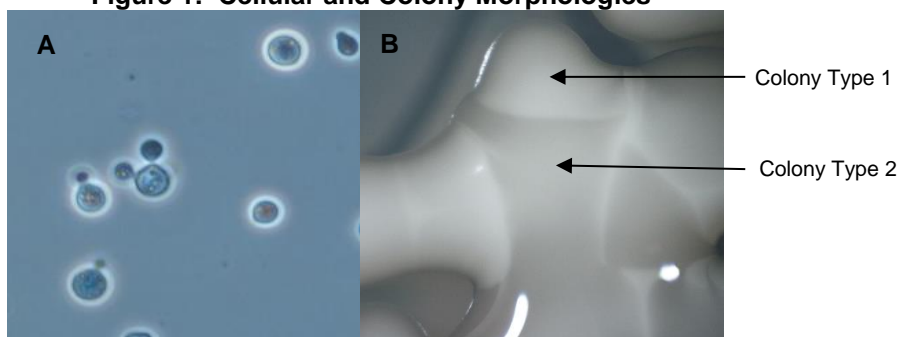
³5 days at 25°C in an aerobic atmosphere. CGB medium differentiates *C. gattii* from *C. neoformans* based on the ability of *C. gattii* isolates to grow in the presence of L-canavanine and to assimilate glycine as a sole carbon source, resulting in a blue color. *C. neoformans* isolates will remain yellow. [McTaggart, L., et al. "Rapid Identification of *Cryptococcus neoformans* var. *grubii*, *C. neoformans* var. *neoformans*, and *C. gattii* by Use of Rapid Biochemical Tests, Differential Media, and DNA Sequencing." *J. Clin. Microbiol.* 2011 (49): 2522-2527. PubMed: 21593254.]

⁴*C. neoformans* subspecies can be differentiated by IGS sequence analysis; > 4% divergence is expected between species [McTaggart, L., et al. "Rapid Identification of *Cryptococcus neoformans* var. *grubii*, *C. neoformans* var. *neoformans*, and *C. gattii* by Use of Rapid Biochemical Tests, Differential Media, and DNA Sequencing." *J. Clin. Microbiol.* 2011 (49): 2522-2527. PubMed: 21593254.]

⁵For fluconazole (bioMérieux Etest[®] 510858) a MIC ≤ 8 µg/mL is sensitive and a MIC ≥ 64 µg/mL is resistant.

⁶Clarity of broth was determined by visual inspection after 15 days in an aerobic atmosphere.

Figure 1: Cellular and Colony Morphologies



Date: 04 APR 2017

Signature: 
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