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Certificate of Testing

Cholera Toxin (Azide-Free) from *Vibrio cholerae*

Prod. No: 100B

Lot Number: 10072A2

Date of Manufacture 2 February 2026

FOR RESEARCH PURPOSES ONLY. NOT FOR HUMAN USE.

Contents

Each container holds 1 mg of lyophilized Cholera Toxin (CT) in 0.05 M Tris, 0.2 M NaCl, 0.001 mM Na₂EDTA at pH 7.5 when reconstituted with 0.5 mL water. **Handle the product gently; do not vortex.**

Storage/Shipping Requirements

Store at 5 ± 3°C. This product is provided as an aseptically packaged lyophilized powder, sealed under vacuum. Ship material at ambient temperature

Handling

Good laboratory technique should be employed in the safe handling of this product. Wear appropriate laboratory attire including a lab coat, gloves, and safety glasses.

The product is intended for research purposes by qualified personnel. It is not intended for use in humans or as a diagnostic agent. List Biological Laboratories, Inc. is not liable for any damages resulting from the misuse or handling of this product.

Attribute	Test Method ID/Version	Results	Pass / Fail
Appearance	Physical Appearance / ASSAY.063 v6.0	Before reconstitution: uniform white powder After reconstitution: clear, colorless, and particulate free	Pass
Purity	SDS-PAGE / GELS.018 v19.0	<u>Non-reduced</u> A subunit: 24.1% A ₁ subunit: 7.6% A ₂ subunit: 1.9% B subunit: 62.1% Total % purity: 95.7% <u>Reduced:</u> A subunit: 1.1% A ₁ subunit: 26.8% A ₂ subunit: 7.6% B subunit: 64.6% Total % purity: 100%	Pass
	Native Gel / GELS.008 v5.0	91.6% purity	Pass
	OD Measurement / ASSAY.060 v7.0	A ₂₈₀ /A ₂₆₀ : 1.97 A ₃₂₀ : 0.06	Pass
	Endotoxin / ASSAY.092 v7.0	22.8 EU/mg	N/A
CTB Functional Affinity	Hemagglutination Assay ¹ / ASSAY.011 v6.0	Lowest concentration with positive response to assess binding activity using GM1 ganglioside fixed sheep red blood cells: 0.00625 mg/mL ¹	N/A
	ELISA / ASSAY.108 v1.0	EC ₅₀ of titer curve for binding ability of cholera toxin to an ELISA plate coated with 2 µg GM1: 14.1 ng/mL	N/A
Activity	CHO Cell Assay / ASSAY.141 v1.0	Lowest concentration of toxin at which a positive response was obtained: 0.001 ng/mL	N/A

¹In February 2026, The CHO Cell assay was added to evaluate biological activity of product 100B. Starting March 2026, the HA Assay will no longer be performed for product 100B.

Quality Control:  Date: 20 Feb 2026

Production:  Date: 02/20/2026