



**LIST BIOLOGICAL  
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Product #100B  
Release Date: December 2016  
Last Retest: October 2018  
Recommended Retest: March 2022

**CERTIFICATE OF ANALYSIS  
CHOLERA TOXIN**  
from *Vibrio cholerae* Inaba 569B  
Lot #10068A1

**Contents**

Each vial contains 1 mg of Cholera Toxin (CT). When reconstituted to 0.5 ml with water, the buffer is 0.05 M Tris, 0.2 M NaCl, 0.001 M Na<sub>2</sub>EDTA at pH 7.5. **Handle the product gently; do not vortex.**

**Concentration**

Protein concentration was determined by absorbance at 280 nm using an extinction coefficient of 1.14 for a 1 mg/ml solution.<sup>1</sup>

**Purity**

When examined by gel electrophoresis in a non-denaturing system run at alkaline pH, this protein migrates as a single major band. Purity is >95% as estimated by densitometric analysis of an SDS-PAGE. The 280 to 260 nm ratio of absorbance (R<sub>280/260</sub>) is 2.

The endotoxin content, determined using a kinetic chromogenic LAL assay, is approximately 45 EU/mg.

**Assay**

Binding activity was assessed by hemagglutination using GM1 fixed sheep red blood cells. This lot exhibited hemagglutination activity at < 2 µg/ml when examined by a modification of Sato, *et.al.*<sup>2</sup>

The binding affinity of Cholera Toxin (CT) to GM1 ganglioside was demonstrated using an ELISA plate coated with 1 µg/mL GM1. The midpoint of the curve was approximately 70 ng/ml CT.

**Packaging/Storage**

This product is supplied as lyophilized powder, sealed under vacuum. Store at 2 – 8°C. **DO NOT FREEZE.**

**Handling**

Good laboratory technique should be employed in the safe handling of this product; refer to the MSDS. Wear appropriate laboratory attire including lab coat, gloves and safety glasses. Nitrile gloves are recommended when handling lyophilized material.

This 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.

**FOR RESEARCH PURPOSES ONLY. NOT FOR HUMAN USE.**

**References**

1. Spangler, Brenda D. (1992) *Microbiological Reviews* **56(4)**, 622-647.
2. Sato, Y., Cowell, J.L., Sato, H., Burstyn, D.G. and Manclark, C.R. (1983) *Infect. Immun.* **41**, 313-320.

Production: ko Date: 11-12-18

Management: NS Date: 11-12-18

QA/QC: GP Date: 11/12/18

Made in U.S.A. 