

# PRODUCT INFORMATION



## Toxin B from *Clostridium difficile* Item No. 19665

### Overview and Properties

---

<b>Synonym:</b>	TcdB
<b>Contents:</b>	Each vial contains 50 µg of <i>C. difficile</i> toxin B in 50 mM Tris, 100 mM NaCl, and pH 7.5, at a concentration of 0.2 mg/ml.
<b>Uniprot No.:</b>	P18177
<b>Storage:</b>	2-8°C (as supplied)
<b>Stability:</b>	≥4 years
<b>Purity:</b>	≥90% estimated by SDS-PAGE
<b>Activity:</b>	EC <sub>50</sub> value of 1 pg/ml as tested on Vero cells
<b>Special Conditions:</b>	Handle gently; do not vortex; do not freeze

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Description

---

Toxin B from *Clostridium difficile*, also known as TcdB, is a cytotoxin that has glucosyltransferase and cysteine protease activities. It inactivates host Rho family GTPases by glucosylation, altering cytoskeletal structure, cell division, and cell-cell adhesion.<sup>1,2</sup> Toxin B can induce activation of the inflammasome and apoptosis.<sup>3</sup> While both toxin A (Item No. 19664) and toxin B inactivate Rho family GTPases, toxin B more potently induces mammalian cell rounding in culture.<sup>2</sup>

### References

---

1. Chen, S., Sun, C., Wang, H., *et al.* The role of rho GTPases in toxicity of *Clostridium difficile* toxins. *Toxins (Basel)* **7(12)**, 5254-5267 (2016).
2. Pruitt, R.N. and Lacy, D.B. Toward a structural understanding of *Clostridium difficile* toxins A and B. *Front. Cell. Infect. Microbiol.* **2(28)**, (2012).
3. Di Bella, S., Ascenzi, P., Siarakas, S., *et al.* *Clostridium difficile* toxins A and B: Insights into pathogenic properties and extraintestinal effects. *Toxins (Basel)* **8(5)**, (2016).

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/12/2025

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM