

PRODUCT INFORMATION



Toxin A from *Clostridium difficile*

Item No. 19664

Overview and Properties

Synonyms:	TcdA
Contents:	Each vial contains 100 µg of <i>C. difficile</i> toxin A enterotoxin; when reconstituted with 0.5 ml of water, the buffer contains 50 mM Tris, 50 mM NaCl, pH 7.5, and 0.1% trahalose
Uniprot No.:	P16154
Storage:	4°C (as supplied)
Stability:	≥2 years
Purity:	≥80% (estimated by SDS-PAGE)
Activity:	EC ₅₀ of <0.2 ng/ml, as tested on Vero cells
Special Conditions:	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 A from *Clostridium difficile*, also known as TcdA, is an enterotoxin that has glucosyltransferase and cysteine protease activities. It inactivates host Rho family GTPases by glucosylation, altering cytoskeletal structure, cell division, and cell-cell adhesion.^{1,2} Toxin A can induce activation of the inflammasome and apoptosis.³ While both toxin A and toxin B (Item No. 19665) inactivate Rho family GTPases, toxin A has a higher binding affinity for epithelial cell surface carbohydrates.²

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.

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