C. difficile Toxin B/TcdB Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF6246

DESCRIPTION

Species Reactivity	*C. difficile*
Specificity	Detects *C. difficile* Toxin B/TcdB in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant *C. difficile* Toxin B/TcdB Ser2-Leu543 Accession # P18177
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

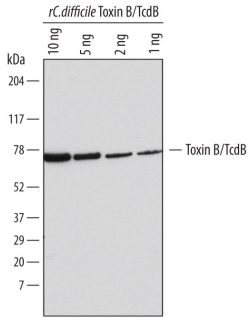
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of *C. difficile* Toxin B/TcdB by Western Blot. Western blot shows recombinant *C. difficile* Toxin B/TcdB (Catalog # 6246-GT). PVDF membrane was probed with 1 µg/mL of Sheep Anti-*C. difficile* Toxin B/TcdB Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6246) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Toxin B/TcdB at approximately 75 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Clostridium difficile is the leading cause of hospital-acquired diarrhea, known as *C. difficile*-associated disease. The estimated number of cases of *C. difficile*-associated disease exceeds 250,000 per year (1), with health care costs approaching US $1 billion annually (2). The major virulence factors produced by *C. difficile* are two toxins, TcdA and TcdB. Both toxins can monoglucosylate and inactivate Rho family small GTPases within target cells, leading to disruption of vital signaling pathways in the cell, subsequently causing diarrhea, inflammation, and damage of colonic mucosa (3, 4, 5). Both toxins have a similar tripartite structure comprised of an N-terminal glucosyltransferase domain, a C-terminal receptor binding domain, and a small hydrophobic span possibly involved in toxin translocation (6). Our recombinant TcdB consists of the enzymatic domain. Both TcdA and TcdB also have potassium-dependent UDP-Glc hydrolase activity, which is essentially glucosyltransferase activity with water as the acceptor molecule (7). Under same conditions, UDP-glucose hydrolysis by TcdB occurs at a rate about 5-fold greater than that of TcdA.

References:

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5. Just I, *et al.* (1995) J. Biol. Chem. **270**:13932.
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