

Datasheet for ABIN1098188

Clostridium Difficile Toxin A and B ELISA Kit**2** Images**4** Publications[Go to Product page](#)

Overview

Quantity:	96 tests
Target:	Clostridium Difficile Toxin A and B
Reactivity:	Clostridium difficile
Method Type:	Sandwich ELISA
Application:	ELISA

Product Details

Purpose:	ELISA for the simultaneous detection of Clostridium difficile toxin A and B in stool
Sample Type:	Fecal
Analytical Method:	Qualitative
Detection Method:	Colorimetric
Characteristics:	The test is an in vitro diagnostic enzyme immunoassay for the detection of toxin A and toxin B produced by toxigenic strains of Clostridium difficile in human feces.
Components:	<ul style="list-style-type: none">• 1x ELISA Plate 12x8 stripes• 1 x 50 mL dilution buffer• 1 x 2.0 mL Standard control Toxin A&B• 1 x 7 mL conjugate• 1 x 30 mL 10x washing buffer• 1 x 14 mL substrate• 1 x 7.5 stop solution with 0.5 M H₂SO₄• 1x Manual
Material not included:	<ul style="list-style-type: none">• Wash bottle

Product Details

- Timer
- Paper towels or absorbent sheets
- Discard container
- Vortex mixer
- Microplate shaker
- Refrigerator
- Distilled water
- Microcentrifuge
- Microplate reader

Target Details

Target:	Clostridium Difficile Toxin A and B
Background:	<p>C. difficile is an opportunistic anaerobic bacterium that grows in the intestine once the normal flora has been altered due to treatment with antibiotics. Subsequently, many patients develop gastrointestinal problems ranging from mild diarrhea to severe pseudomembranous colitis.</p> <p>The clinical symptoms associated with the disease are believed to be primarily due to the tissue-damaging enterotoxin A (TcdA), whereas the cytotoxin (TcdB) is the one detected by the cell culture cytotoxicity assay.</p> <p>Most strains produce both toxins, although clinically relevant toxin A negative/toxin B positive strains have been isolated with increasing frequency worldwide. Laboratory diagnosis of C. difficile infection is most commonly performed in a two-step algorithm: (1) screening of C. difficile presence using an immunoassay for the detection of C. difficile glutamate dehydrogenase (GDH) followed by (2) assaying the presence of toxins A/B using either an immunoassay and/or by PCR based techniques, the latter especially important in cases where the GDH test is positive but the toxin ELISA results negative. This could be the case for toxin production below the detection limit or capture of toxins by antitoxin antibodies.</p>

Application Details

Application Notes:	<ul style="list-style-type: none">• Sensitivity of the assay for TcdA: 0,5 ng/ml• Sensitivity of the assay for TcdB: 1,0 ng/ml
Plate:	Pre-coated
Sample Preparation:	Transfer about 50 µl liquid stool sample or take an equivalent amount (50 mg) of compact stool in 450 µl dilution buffer. Please only dilute the feces with the supplied dilution buffer, otherwise

Application Details

incorrect measurements can occur. Homogenize the suspension by suction and ejection from a disposable pipette or by vortexing. After leaving for a short time to allow sedimentation of stool particles the clarified supernatant can be used directly in the test. Automated equipment may be used with specimens that have been centrifuged 5 min by 2500 x g to remove any particulate matter.

Note: If overnight storage of the diluted sample is desirable, the storage should be done at -20 °C. Otherwise, in rare cases the test could lead to false positive results

Restrictions: For Research Use only

Handling

Preservative: ProClin

Handling Advice:

- Wear gloves for all manipulations with potentially contaminated or toxic suspensions.
- All reagents must be at room temperature prior to their use in the assay.

Storage: 4 °C

Storage Comment: Once opened, the kit is stable for at least 6 month when stored properly at 2-8 °C.

Expiry Date: 6 months

Publications

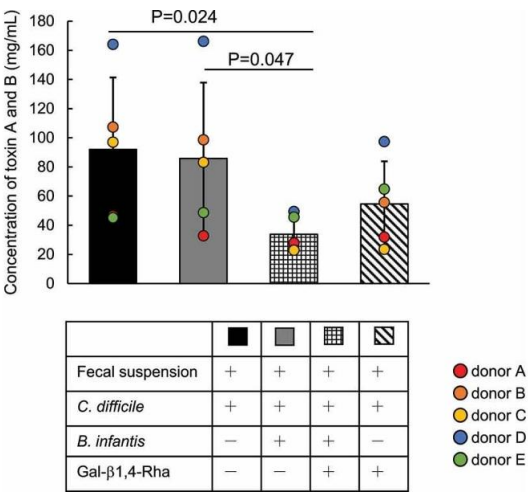
Product cited in: Hirano, Sakanaka, Yoshimi, Sugimoto, Eguchi, Yamauchi, Nara, Maeda, Ami, Gotoh, Katayama, Iida, Kato, Ohno, Fukiya, Yokota, Nishimoto, Kitaoka, Nakai, Kurihara: "Next-generation prebiotic promotes selective growth of bifidobacteria, suppressing Clostridioides difficile." in: **Gut microbes**, Vol. 13, Issue 1, pp. 1973835, (2022) ([PubMed](#)).

von Schwanzenberg, Bisanz, Lyalina, Spanogiannopoulos, Ang, Cai, Dickmann, Friedrich, Liu, Collins, Ingebrigtsen, Miller, Turnbaugh, Patterson, Pollard, Mai, Spranger, Turnbaugh: "Caloric restriction disrupts the microbiota and colonization resistance." in: **Nature**, Vol. 595, Issue 7866, pp. 272-277, (2021) ([PubMed](#)).

Edwards, Krall, McBride: "Strain-Dependent RstA Regulation of Clostridioides difficile Toxin Production and Sporulation." in: **Journal of bacteriology**, Vol. 202, Issue 2, (2020) ([PubMed](#)).

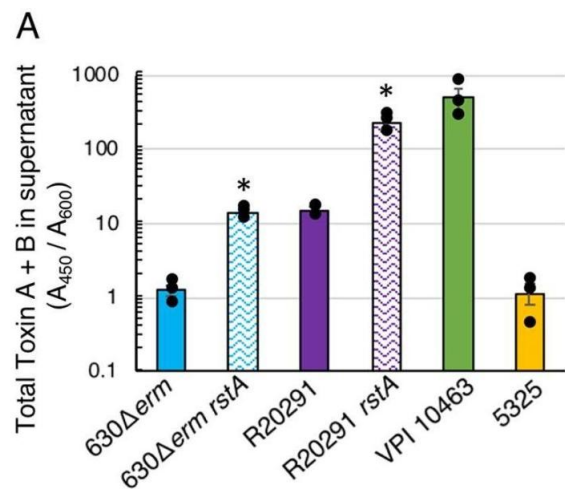
Dhillon, Johnson, Shannon, Greenwood, Roberts, Bustin: "Homogeneous and digital proximity ligation assays for the detection of Clostridium difficile toxins A and B." in: **Biomolecular**

Images



ELISA

Image 1. *C. difficile*, *B. infantis*, and/or human fecal suspension from 5 donors were cultured in GAM-wos supplemented with or without 0.5% Gal-β1,4-Rha for 48 h, and CD toxins A and B in the fecal cultures were quantified by ELISA. Black bar, fecal suspension, and *C. difficile* were cultured in GAM-wos; gray bar, *C. difficile*, *B. infantis*, and fecal suspension were co-cultured in GAM-wos; checkered bar, *C. difficile*, *B. infantis*, and fecal suspension were co-cultured in GAM-wos supplemented with 0.5% Gal-β1,4-Rha; diagonal bar, *C. difficile* and fecal suspension were cultured in GAM-wos supplemented with Gal-β1,4-Rha. These culture conditions are summarized in the table below the Figure (+, when the components were added to the medium; -, when not added). For all fecal suspensions, CD toxin was not detected when *C. difficile* was not inoculated into the culture and is not shown in the figure. Data represent means ± standard deviation. Paired one-way ANOVA followed by multiple comparison with Bonferroni correction was performed. Individual data points are represented by circles. Source: PMID34553672



ELISA

Image 2. Levels of TcdA and TcdB present in the supernatants of 630Δerm, 630Δerm *rstA* (MC1118), R20291, R20291 *rstA* (MC1402), VPI 10463, and 5325 grown in TY medium (pH 7.4) at H24 were quantified by an ELISA, as detailed in Materials and Methods, and read as the absorbance at 450 nm normalized to the cell density (OD600). Source: PMID31659010