

Product Specification Sheet

□ **Cat.** CDTA15-R-25 Native Clostridium Difficile Toxoid A (VPI 10463, >95% Pure) Size: □ 25 ug

Clostridium difficile has been recognized as a toxin-producing anaerobic bacterium responsible for antibiotic-associated colitis, and it is now the most common infectious cause of nosocomial diarrhea. *C. difficile*-associated diarrhea (CDAD) and pseudomembranous colitis are believed to result from the actions of 2 bacterial exotoxins, toxin A and toxin B, that are produced by pathogenic strains of the bacterium. Both toxins have cytotoxic and proinflammatory properties. Toxin A causes intestinal injury and secretion in both animals and humans. Toxin B has little effect on the intact intestine in animal models but appears to be a potent toxin for human colon.

Clostridium difficile toxin A (TcdA) is similar to *Clostridium difficile* Toxin B. The toxins are the main virulence factors produced by the gram positive, anaerobic, *Clostridium difficile* bacteria. TcdA is one of the largest bacterial toxins known with a molecular mass of 308 kDa and is usually described as a potent enterotoxin. Risk factors for *C. difficile* infection include antibiotic treatment, which can disrupt normal intestinal microbiota and lead to colonization of *C. difficile* bacteria. The gene contains an open reading frame (ORF) of 8,133 nucleotides, coding for 2,710 amino acids. TcdA and TcdB share 63% homology in their amino acid sequences. Environmental stresses such as antibiotics and catabolite repression can influence toxin expression.

Source and Forms of Protein

Clostridium Difficile Toxoid A purified from *C. difficile* strain VPI 10463 and converted to inactive toxoid form. Purified *Clostridium Difficile* Toxoid A protein (>95%) is supplied in 0.05 M HEPES, 0.15 M NaCl and 5% sucrose.

Clostridium Difficile Toxoid A is generally provided as 25 ug/50 ul. A higher concentration can be provided on request. See the vial label for lot specific concentration.

Storage

Short-term: unopened, undiluted vials for less than a week at 4°C.

Long-term: at -20°C or below in suitable aliquots after reconstitution.

Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder.

Recommended Usage

This protein is suitable for ELISA as a coating antigen, immunogen, or Western blot positive control.

Western Blotting: Load ~100-200 ng/lane for good visibility with appropriate antibodies. Expected band size is ~310 kDa.

ELISA: 50-100 ng antigen/well.

General References: Bartlett JG (2002) N Engl J Med., 346, 334-339.

This product is for in vitro research use only.

Related material available from ADI

Catalog#	Description
CDTA11-BTN	Biotinylated Rabbit anti-Clostridium Difficile Toxin A antibody, affinity purified
CDTA11-S	Rabbit anti-Clostridium Difficile Toxin A antiserum (Native <i>C. difficile</i> toxin A immunogen)
CDTA12-M-1	Mouse Monoclonal anti-Clostridium difficile toxin A IgG (Clone #1)
CDTA12-M-2	Mouse Monoclonal anti-Clostridium difficile toxin A IgG (Clone #2)
CDTA12-M-3	Mouse Monoclonal anti-Clostridium difficile toxin A IgG (Clone #3)
CDTA15-R-25	Native Clostridium Difficile Toxoid A (VPI 10463, >95% Pure)
CDTB12-M-1	Mouse Monoclonal anti-Clostridium difficile toxin B IgG (Clone #1)
CDTB12-M-2	Mouse Monoclonal anti-Clostridium difficile toxin B IgG (Clone #2)
CDTA-010-96	Clostridium difficile Toxin/Toxoid A antigen ELISA kit, 96 tests, Quantitative
CDTA-015	Human anti-Clostridium difficile Toxin A IgG ELISA kit, 96 tests, Quantitative
CDTA-020	Human anti-Clostridium difficile Toxin A IgM ELISA kit, 96 tests, Quantitative
C. difficile toxin A antibody ELISA Kits for various species and antibody isotypes also available	
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