

Recombinant *Clostridioides difficile* (Peptoclostridium difficile) tcdB Protein (Gly1834-Glu2053), N-SUMO tagged

Cat. No. tcdB-1451C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant <i>C. difficile</i> toxB (Gly1834-Glu2053) fused with the N-terminal SUMO tag was expressed in <i>E. coli</i> .
Species	<i>Clostridioides difficile</i>
Source	<i>E. coli</i>
ProteinLength	Gly1834-Glu2053
Description	<i>Clostridium difficile</i> is the leading cause of hospital-acquired diarrhea, known as <i>C. difficile</i>-associated disease. The estimated number of cases of <i>C. difficile</i>-associated disease exceeds 250, 000 per year, with health care costs approaching US \$1 billion annually. The major virulence factors produced by <i>C. difficile</i> 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. 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. 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. Under same conditions, UDP-glucose hydrolysis by TcdB occurs at a rate about 5-fold greater

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than that of TcdA.

Form	Lyophilized powder/frozen liquid
Molecular Mass	43.1 kDa
Purity	>90% as determined by SDS-PAGE.
Notes	For research use only.
Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.
Storage Buffer	Supplied as solution form in PBS or lyophilized from PBS.
Reconstitution	Reconstitute in sterile water for a stock solution.
Shipping	They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

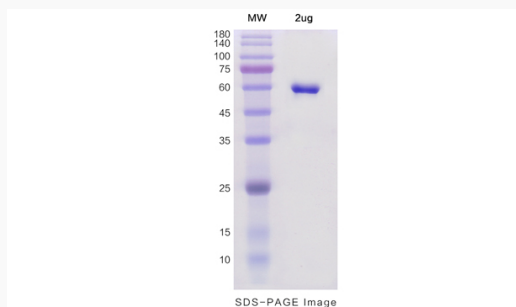
Official Symbol	tcdB
Synonyms	tcdB; Toxin B; EC:3.4.22.-; Glucosyltransferase TcdB; TcdB; toxB
UniProt ID	P18177

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SDS-PAGE



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