

Product Specification Sheet

Cholera Toxin Protein Antibodies

<input type="checkbox"/> # CTOX25-S	Rabbit Anti-Cholera Toxin B antiserum (unpurified)	Size: <input type="checkbox"/> 100 ul
<input type="checkbox"/> # CTOX26-A	Rabbit Anti-Cholera Toxin B IgG, purified	Size: <input type="checkbox"/> 100 ul
<input type="checkbox"/> # CTOX27-C	Purified Cholera Toxin B subunit control for Western blot	Size: <input type="checkbox"/> 100 ul

Cholera toxin (sometimes abbreviated to CTX, Ctx, or CT) is a protein complex secreted by the bacterium *Vibrio cholerae*. CTX is responsible for the harmful effects of cholera infection. The cholera toxin is an oligomeric complex made up of six protein subunits: a single copy of the A subunit (part A), and five copies of the B subunit (part B). The two parts are connected by a disulfide bond. The three-dimensional structure of the toxin was determined using X-ray crystallography by Zhang et al. in 1995. The five B subunits—each weighing 12 kDa, and all colored blue in the accompanying figure—form a five-membered ring. The A subunit has two important segments. The A1 portion of the chain (CTA1, red) is a globular enzyme payload that ADP-ribosylates G proteins, while the A2 chain (CTA2, orange) forms an extended alpha helix which seats snugly in the central pore of the B subunit ring. This structure is similar in shape, mechanism, and sequence to the heat-labile enterotoxin secreted by some strains of the *Escherichia coli* bacterium.

Source of Peptide Antigen and Antibodies

Antigen	Purified B subunit of cholera toxin
Ab Host/type	Rabbit polyclonal, unpurified crude antiserum (cat # CTOX25-S) containing 0.05% azide; the same is also purified as IgG (#CTOX26-A) and supplied in PBS, pH 7.4 and 0.05% azide
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Purified cholera toxin B subunit (>99% by SDS-PAGE, ~11 Kda) for Western blot +ve control (**Cat # CTOX27-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **CTOX27-C** for good visibility with antibody Cat # **CTOX27-M**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **CTOX27-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Antiserum undiluted)

100 ul/vial
 solution lyophilized powder
contains 0.05% azide, **Reconstitute powder** in 100 ul water

Purified antibody undiluted)

100 ul/vial
 solution lyophilized powder
contains 0.05% sodium azide
Reconstitute powder in 100 ul water

Storage

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

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting. suggested antibody dilution of 1-5 ug/ml .The antibody recognizes ~11 kDa cholera toxin subunit B

ELISA: Control protein should be coated at 1 ug/ml.

Immunocytochemistry. Not tested. .

Antibody specificity Cross-reactivity

Both unpurified antiserum (#CTOX25-S) and purified IgG (#CTOX26-A) antibodies react with cholera toxin subunit B with no significant reactivity with subunit A. Purified IgG generally gives more cleaner background in ELISA, Western or IHC. Purified cholera subunit B protein controls (#CTOX27-C) for western blot is available for use as positive control.

General References: Sato Y (1983) Infect. Immun. 41, 313-320; Spangler BD (1992) Microbiol. Rev. 56, 622-647; Gill DM (1976) Bicochem. 15, 1242; Lai CY (1977) JBC 252, 7249; Rappaport RS (1974) Infect. Immun. 9, 294-303.

For In Vitro Research Use and Manufacturing Only.

Related material available from ADI

Catalog#	ProdDescription
CTOX11-S	Anti-Cholera Toxin protein antiserum
CTOX11-C	Purified Cholera Toxin protein control for Western Blot
CTOX15-N-500	Purified Cholera Toxin (antigen grade)
CTOX15-N-1000	Purified Cholera Toxin (antigen grade)
CTOX16-N-100	Purified Cholera Toxin A Subunit protein
CTOX16-S	Anti-Cholera Toxin A subunit antiserum
CTOX16-C	Purified Cholera Toxin A subunit protein control for Western Blot
CTOX25-N-1000	Purified Cholera Toxin B Subunit (Choleraegenoid) protein
CTOX25-S	Anti-Cholera Toxin B subunit antiserum
CTOX26-A	Anti-Cholera Toxin B subunit IgG
CTOX27-M	Monoclonal Anti-Cholera Toxin B subunit IgG
CTOX27-C	Purified Cholera Toxin B subunit protein control for Western Blot
CTOX28-S	Anti-Cholera Toxin B subunit (Choleraegenoid) antiserum

CTOX25-S 120910A

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