



Anti-Vero Toxin1 (E. coli) / Shiga Toxin (S. dysenteriae) antibody

BACKGROUND

Vero toxin 1 (VT1) is produced by Vero toxin1-producing E.coli (VTEC) and has lethal activity to Vero cells. The primary structure of VT1 is identical or nearly identical to Shiga toxin (Stx) produced by Shigella dysenteriae serotype 1 and also called Slt 1 (Shiga-like toxin 1). VT1 is composed from one A subunit and five B subunits. Some E. coli strains produce both Slt1 and Slt2, and they share sequence identity of 55 %, but they are immunologically distinct.

To express the activity of VT/Stx, interaction with specific receptor Gb3 is indispensable. VT/Stx removes the 4324th adenine of 28S RNA of ribosome, inhibits protein synthesis and causes cell death. After invasion into cell subunit A is cut by furin to give A1 and A2. A1 is a catalytic fragment, and A2 is required for holo-enzyme formation by combining subunit B.

Applications: 1) Western blotting (2,000 fold dilution) (Fig. 1)

2) Immunoprecipitation (Fig. 2) 3) ELISA Other applications have not been tested.

Immunogen: Initial immunization by VT1 toxoid and booster by VT1 toxin.

Reactivity: VT1 of E. coli VTEC strain and Shiga toxin of Shigella dysenteriae 1.

Form: Rabbit antiserum added with 0.09% sodium azide.

Size: 100 uL

Storage: Sent at 4°C. Upon arrival, spin-down, aliquot and store at -20°C.

Data link: GenBank [M16625](#) Shiga-like toxin I subunit A and subunit B

UniProtKB/Swiss-Prot [Q9FBI2](#) Shiga toxin subunit A

UniProtKB/Swiss-Prot [Q7BQ98](#) Shiga toxin subunit B



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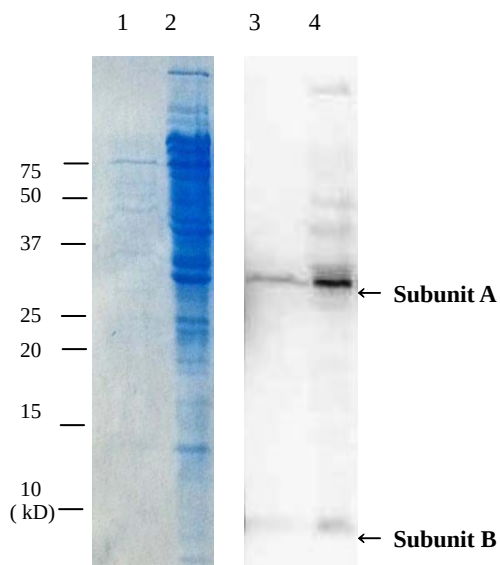


Fig.1.Detection of VT1 by western blotting with anti-VT1 antibody.

1. SDS-PAGE of culture medium of VTEC, stained with CBB
2. SDS-PAGE of crude extracts of VTEC cells, stained with CBB
3. Western blotting of culture medium of VTEC
4. Western blotting of crude extracts of VTEC cells.
Anti-VT1 antibody was used at 1/2,000 dilution

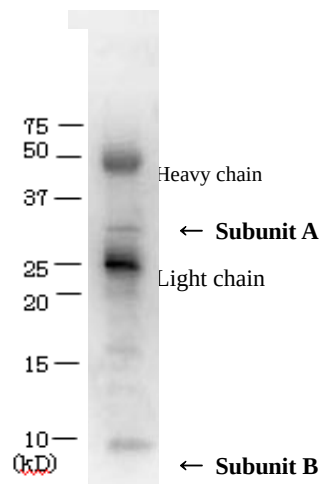


Fig. 2. Immunoprecipitation of VT1 from culture medium of VTEC with anti-VT1 antibody.

Arrows shows subunit A and subunit B of VT1.

Heavy chain and Light chain indicate those of IgG.

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