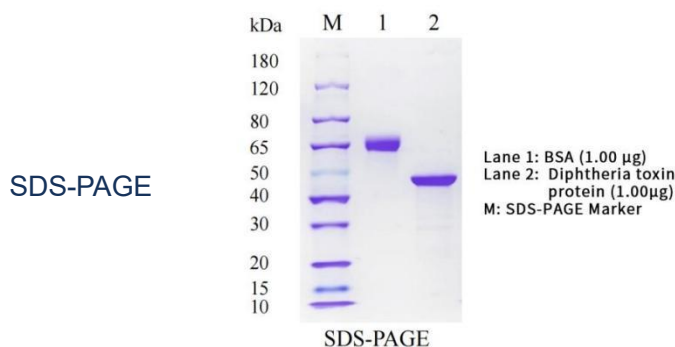


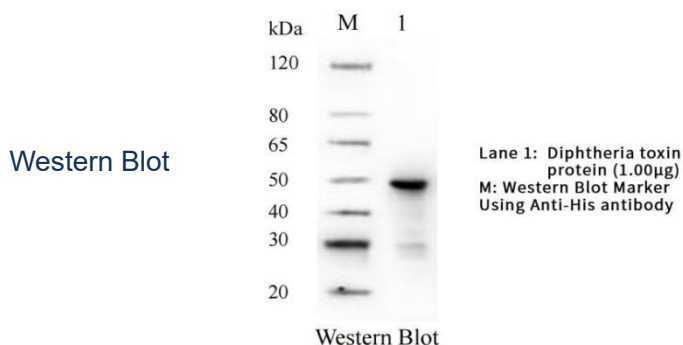
Nontoxic Diphtheria Toxin

Cat.No:DTD02

DESCRIPTION

Name	Nontoxic Diphtheria Toxin, Recombinant CRM197, Corynebacterium beta
Purity	>95% by SDS-PAGE
Expression System	<i>E.coli</i>
molecular weight	43 kDa
Endotoxin	<1EU/μg
Label	C-His
Physical Appearance	Transparent colorless solution/freeze-dried powder
Buffer	1×PBS, pH7.4
Reconstitution	Add 1.00ml of sterile deionized water to dissolve and gently shake until completely dissolved
Transportation conditions	Recombinant proteins are transported in freeze-dried powder form and in ice packs at low temperatures, Large packaged recombinant protein in frozen liquid form, transported on dry ice
Stability & Storage	Freeze dried powder can be stored at 4°C for three years.Used within 2-4 weeks after reconstitution, can be stored at 4°C for 3 years at -20°C





Background:

Diphtheria toxin is an exotoxin released by *Corynebacterium diphtheriae*, which has toxic molecules and is the main pathogenic substance causing diphtheria disease. There are three structural regions: the N-terminus is the catalytic region, the middle is the transmembrane region, and the C-terminus is the receptor binding region. Under the action of trypsin, diphtheria toxin is degraded into A fragment and B fragment. DTA is the enzyme active region of diphtheria toxin and a key structural domain of DT type immunotoxins, which inhibits protein synthesis by catalyzing ADP ribosylation on chain elongation factor 2. However, *Escherichia coli* chain elongation factor G is not affected by this, so some diphtheria expression plasmids based on DTA fragments can be amplified in engineered bacteria. DTA protein and its monoclonal antibodies have important value in the study of the toxicity mechanism, detection, and purification of immunotoxins. At the same time, by utilizing its characteristic of producing specific immunity, it can be used to make targeted drugs. In early anti infection treatment, toxoid vaccines made from diphtheria toxin can be used for the prevention of the disease.

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