

PRODUCT SPECIFICATION

STATENS
SERUM
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POL 017 Anti Diphtheria toxin (DT)

Rabbit polyclonal antibody

Article No.	66133								
Product Name	POL 017 Anti Diphtheria toxin (DT)								
Description	<p>Preparation: Sterile filtered, 0.22 µm pore size</p> <p>Content: ~ 10 mg/ml IgG</p> <p>Solvent: Serum with 15 mM NaN₃</p> <p>Storage: 2-8 °C</p>								
Antigen	<p>Diphtheria toxin (DT) is secreted by certain strains of <i>Corynebacterium diphtheriae</i> and catalyzes the ADP-ribosylation of eukaryotic aminoacyl-transferase II (EF-2) using NAD as a substrate (1). This reaction forms the basis for its toxicity towards eukaryotic organisms (2). Diphtheria toxin is synthesized and excreted as a proenzyme, composed of a single polypeptide chain having a molecular weight of approximately 63 kDa (3). Two covalent alterations in structure are necessary for expression of its enzymatic activity. First, mild proteolysis results in the formation of "nicked toxin", which is enzymatically inactive and consists of two major fragments, A and B, linked by a disulfide bond. Reduction of the nicked toxin with thiols releases the N-terminal A fragment (~24 kDa) which is enzymatically active. The C-terminal B fragment (~39 kDa) has no apparent enzymatic activity, but is required for toxicity. Evidence suggests that the B fragment is responsible for recognizing and binding the toxin to cell surface receptors (4).</p>								
Immunogen	Diphtheria toxoid (formaldehyde inactivated Diphtheria toxin).								
Specificity	POL 017 reacts both with toxoid and toxin.								
Epitope Specificity	Not determined.								
Reactivity	POL 017 reacts well in ELISA with coated diphtheria toxoid. When used in western blots POL 017 detects a band at approximately 63 kDa corresponding to the proenzyme.								
Immunization	Rabbits were subcutaneously immunized with immunogen with Freund's complete adjuvant and Al(OH) ₃ initially and then likewise but with Freund's incomplete adjuvant in subsequent immunizations.								
Application	<table><thead><tr><th>Method</th><th>Usability</th></tr></thead><tbody><tr><td>ELISA</td><td>yes</td></tr><tr><td>Immunoblotting</td><td>yes</td></tr><tr><td>Immuno.fluoresc.</td><td>nd.</td></tr></tbody></table>	Method	Usability	ELISA	yes	Immunoblotting	yes	Immuno.fluoresc.	nd.
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References	<p>1) Honjo, J., Nishizuka, Y., Hayaishi, O. and Kato, I. (1968) J. Biol. Chem. 243, 3553-3555.</p> <p>2) Gill, D.M., Pappenheimer, Jr., A.M. and Baseman, J.B. (1969) Cold Spring Harbor Symp. Quant. Biol. 34, 595-602.</p> <p>3) Collier, R.J. and Kandel, J. (1971) J. Biol. Chem. 246, 1496-1503.</p> <p>4) Ittelson, T.R. and Gill, D.M. (1973) Nature 242, 330-332.</p>								

Conditions

For research use only. Not for use in diagnostic procedures. Not for therapeutic use or applications.

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