

**Anti Diphtheria toxoid
Mouse monoclonal antibody**

Subclass: IgG1/k

PRODUCT NO.	HYB 123-09																
PRESENTATION	Preparation: Protein-A purified Content: Available in 200 µL and 1 mL, 1 mg/mL Solvent: 0.01 M phosphate buffer, pH 7.4, with 0.5 M NaCl Storage: In the dark at 4-8°C																
ANTIGEN	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 toward 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, Diphtheria toxoid (formaldehyde inactivated Diphtheria toxin).																
IMMUNOGEN																	
SPECIFICITY	HYB 123-09 reacts with Diphtheria toxoid (formaldehyde inactivated Diphtheria toxin)																
EPITOPE SPECIFICITY	HYB 123-09 reacts with a different epitope compared with HYB 123-16 and HYB 123-18.																
REACTIVITY	HYB 123-09 reacts well in ELISA with coated Diphtheria toxoid. When used in WB HYB 123-09 detects a band at approximately 63 kDa corresponding to the proenzyme.																
CULTURE MEDIUM	Dulbecco's modified Eagle's medium with 10% fetal calf serum																
FUSION PARTNER	X63-Ag8.653																
IMMUNIZATION	Female CF1xBalb/c F1 hybrid mice were immunized i.p. with immunogen.																
APPLICATION	<table border="1"><thead><tr><th>Method</th><th>Usability</th><th>Dilution guideline</th><th>References</th></tr></thead><tbody><tr><td>ELISA</td><td>Yes</td><td></td><td></td></tr><tr><td>Immunoblotting</td><td>Yes</td><td></td><td></td></tr><tr><td>Immunohistochemistry</td><td>Not determined</td><td></td><td></td></tr></tbody></table>	Method	Usability	Dilution guideline	References	ELISA	Yes			Immunoblotting	Yes			Immunohistochemistry	Not determined		
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REFERENCES	<ol style="list-style-type: none">Honjo, J., Nishizuka, Y., Hayaishi, O. and Kato, I. (1968) Diphtheria toxin-dependent adenosine diphosphate ribosylation of aminoacyl transferase II and inhibition of protein synthesis. <i>J Biol Chem.</i>243: 3553-3555.Gill, D.M., Pappenheimer, Jr., A.M. and Baseman, J.B. (1969) Studies on transferase II using diphtheria toxin. <i>Cold Spring Harbor Symp. Quant. Biol</i> 34: 595-602.Collier, R.J. and Kandel, J. (1971) Structure and activity of diphtheria toxin. I. Thiol-dependent dissociation of a fraction of toxin into enzymically active and inactive fragments. <i>J Biol Chem.</i>246: 1496-1503.Ittelson, T.R. and Gill, D.M. (1973) Diphtheria toxin: specific competition for cell receptors. <i>Nature</i> 242: 330-332																

CONDITIONS

All products are supplied on the understanding that they are for in vitro use only. The information and product are offered without guarantee as the ultimate conditions of use are beyond our control. The animals from which this product was derived have not been exposed to or inoculated with any livestock or poultry disease agents exotic to the United States or Western Europe, and did not originate from facilities where work with exotic disease agents affecting livestock or avian species is carried out.