

Anti-Corynebacterium diphtheriae toxoid (Diphtheria toxoid)
Mouse monoclonal antibody

Subclass: IgG1/k

PRODUCT NO.

HYB 123-05

Clone: 17.6B9 G6

PRESENTATION

Preparation: Protein-A/G purified

Content: Available in 200 µL and 1 mL size. 1 mg/mL +/- 15%. See Certificate of Analysis for details.

Solvent: 0.01 M phosphate buffer, pH 7.4, containing 0.5 M NaCl and 15 mM sodium azide

Storage: 4-8°C without exposure to light. No precautions necessary during handling.

ANTIGEN

Corynebacterium diphtheriae is a Gram-positive, non-motile bacterium that can cause serious illness in unvaccinated humans. *C. diphtheriae* infects the epithelial cells of the upper respiratory tract from where they secrete a potent toxin that is absorbed and disseminated through lymph channels and blood to the susceptible tissues of the body. The toxin is a single protein chain of 62 kDa which is "nicked" at proteolytic processing sites to produce an A chain of 21 kDa and a B chain of 40 kDa, held together by a disulfide bridge. The A-chain carries the ADP-ribosylation enzymatic activity responsible for the toxic action (1).

IMMUNOGEN

Diphtheria toxoid prepared from toxin purified from *C. diphtheriae* subsp. *intermedius* Park-Williams no. 8 by formaldehyde inactivation (2), and adsorbed to aluminum hydroxide gel.

SPECIFICITY

HYB 123-05 reacts with diphtheria toxoid (3) and also neutralizes diphtheria toxin as determined in a VERO cell assay.

EPI TOPE SPECIFICITY

Not determined

REACTIVITY

HYB 123-05 reacts strongly with diphtheria toxoid. HYB 123-05 detects diphtheria toxoid in sandwich ELISA in combination with a polyclonal antibody against the toxoid as capture antibody (3). Strong reaction is also seen in ELISA with diphtheria toxoid coated directly onto the microtiter well.

An antibody pair consisting of HYB 123-09 and HYB 123-05 can be used in a sandwich ELISA when using HYB 123-09 as a coat and biotinylated HYB 123-05 a detection antibody.

CULTURE MEDIUM

RPMI 1640 with 10% fetal calf serum

FUSION PARTNER

X63-Ag8.653.

IMMUNIZATION

Female CF1xBalb/c F1 hybrid mice immunized by intraperitoneal injection

APPLICATION

Method	Usability	References
ELISA	Yes	
Immunoblotting	Not determined	
Immunohistochemistry	Not determined	

REFERENCES

1. Pappenheimer AM Jr (1977) Diphtheria toxin. Ann Rev Biochem 46:69-94.
2. World Health Organization (1977) Manual for the production and control of vaccines. Diphtheria toxoid. BLG/UNDP/77.1. World Health Organization, Geneva.
3. Nielsen PB, Koch C, Friis H, Heron I, Prag J, Schmidt J (1987) Double-antibody sandwich enzyme-linked immunosorbent assay for rapid detection of toxin-producing *Corynebacterium diphtheriae*. J Clin Microbiol 25:1280-1284.

CONDITIONS

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