PRODUCT SPECIFICATION

STATENS SERUM INSTITUT

HYB 333-01 Anti Pertussis Toxin

Mouse monoclonal antibody

Article No.	59282 (0.2 mL), 100628 (1.0 mL)
Product Name	HYB 333-01 Anti Pertussis Toxin
Clone	20.6
Subclass	IgG1 / kappa
Description	**Preparation:** Protein-A purified **Concentration:** 1 mg/mL ± 10%, based on A_{280}. See Certificate of Analysis for details. **Solvent:** PBS, pH 7.2 – 7.4 **Storage:** -18 °C or colder
Antigen	Pertussis toxin (islet-activating protein) is the major protein toxin produced by virulent strains of Bordetella pertussis, the organism that causes whooping cough (1). As revealed by polyacrylamide gel electrophoresis, the purified protein consists of five dissimilar subunits: S1 (MW 28,000), S2 (MW 23,000), S3 (MW 22,000), S4 (MW 11,700) and S5 (MW 9,300), in a molar ratio of 1:1:1:2:1. The A-protomer, S1 is responsible for the enzymatic activity of the toxin. Together, S2, S3, S4 and S5 comprise the B-oligomer, responsible for binding the toxin to the cell surface (2).
Immunogen	Pertussis toxin.
Specificity	HYB 333-01 (3) reacts with pertussis toxin. Some reactivity towards the toxoid is also present.
Epitope Specificity	HYB 333-01 has a different epitope specificity compared to HYB 333-02, HYB 333-03, HYB 333-05, HYB 333-06 and HYB 333-09.
Reactivity	HYB 333-01 (MAb clone 20.6) (3) is well suited for ELISA based measurement of pertussis toxin. We recommend using HYB 333-01 as catching antibody in combination with biotinylated HYB 333-02 as detection antibody. HYB 333-01 can neutralize pertussis toxin when measured by Chinese Hamster Ovary cell assays, Leucocytosis promoting activity and *in-vivo* experiments (4,6).
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

Method	Usability	References
ELISA	yes	4-7
Immunoblotting	weakly	4,7
Immunofluorescence	nd.	
Neutralization	yes	4,6

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References

1) **Pittman, M**. (1979). Rev. Infect. Dis. 1, 401-412.

2) **Tamura, M., Nogomori, K., Murai, S., Yajima, M., Ito, K., Katada, T., Ui, M. and Ishi, S**. (1982). Biochem. 21, 5516-5522.

3) HYB 333-01 is known from the literature as "20.6"

4) **Schou C, Au-Jensen M, Heron I**. The interaction between pertussis toxin and 10 monoclonal antibodies. Acta Pathol Microbiol Immunol Scand C. 1987 Oct;95(5):177-87.

5) **Ibsen, P.H. and Heron, I.** (1990) Quantification of pertussis toxin in an enzyme linked immunosorbent assay with improved specificity. Biologicals, 18, 123-126.

6) **Ibsen, P.H**. (1996) The effect of formaldehyde, hydrogen peroxide and genetic detoxification of pertussis toxin on epitope recognition by murine monoclonal antibodies. Vaccine, 14, 359-368.

7) Ibsen PH, Holm A, Petersen JW, Olsen CE, Heron I. Identification of B-cell epitopes on the S4 subunit of pertussis toxin. Infect Immun. 1993 Jun;61(6):2408-18.

Conditions

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