



**Non WHO Reference Material  
Anti-PT S23 subunit Monoclonal Antibody 10C9  
NIBSC code: 99/528  
Instructions for use  
(Version 5.0, Dated 18/05/2015)**

**This material is not for in vitro diagnostic use.**

**1. INTENDED USE**

Material 10C9 is a monoclonal antibody which reacts to pertussis toxin S2 and S3 subunits. The hybridoma cell line for the production of the monoclonal antibody was established by Drs H. Sato and Y. Sato, The National Institute of Infectious Diseases, Tokyo, Japan. Material 10C9 is a monoclonal antibody which has been reported by Sato to react with pertussis toxin S2 and S3 subunits. However in NIBSC this preparation was found to react mainly with S3 subunit and slightly to S2 subunit.

It is for use as a research reagent to characterise pertussis toxin.

**2. CAUTION**

**This preparation is not for administration to humans or animals in the human food chain.**

The material is not of human or bovine origin. As with all materials of biological origin, this preparation should be regarded as potentially hazardous to health. It should be used and discarded according to your own laboratory's safety procedures. Such safety procedures should include the wearing of protective gloves and avoiding the generation of aerosols. Care should be exercised in opening ampoules or vials, to avoid cuts.

**3. UNITAGE**

No unitage is assigned to this material.

**4. CONTENTS**

Country of origin of biological material: United Kingdom.  
Each vial contains 400 µl of frozen material from mouse ascitic fluid. The monoclonal antibody was prepared from pristane-treated mice after intraperitoneal injection with cells of the hybridoma cell line 10C9. The ascitic fluid was diluted 1/25 in PBS containing 1% normal mouse serum. This solution was dispensed in 400 µl aliquots into vials, coded 99/528 and stored at -20°C in the dark.

**5. STORAGE**

It is recommended that unopened vials, aliquots and diluted material not for immediate use, are stored at -20°C or lower. Repeat freeze-thawing should be avoided. The vials contain no bacteriostat and the preparation should not be assumed to be sterile.

**6. DIRECTIONS FOR OPENING**

Vials have a screw cap; an internal stopper may also be present. The cap should be removed by turning anti-clockwise. Care should be taken to prevent loss of the contents. Please note: If a stopper is present on removal of the cap, the stopper should remain in the vial or be removed with the cap.

**7. USE OF MATERIAL**

A suggested dilution of approximately 1/500 of this solution is recommended for the initial dilution on the ELISA plate. However, this may vary with individual laboratories.

**8. STABILITY**

Reference materials are held at NIBSC within assured, temperature-controlled storage facilities. Reference Materials should be stored on receipt as indicated on the label. They remain valid with the assigned potency and status until withdrawn or amended.

Users who have any data supporting any change in the characteristics of this material are encouraged to contact NIBSC.

**9. REFERENCES**

The activities of 10C9 in immunoblot, ELISA and protection in mice has been reported in: Sato H and Sato Y (1990) Protective activities in mice of monoclonal antibodies against pertussis toxin. *Infect. Immun.* 58, 3369 - 3374, and Sato, H., Sato, Y. and Ohishi, I. (1991) Comparison of pertussis toxin (PT)-neutralizing activities and mouseprotective activities of anti-PT mouse monoclonal antibodies. *Infect. Immun.* 59 (10), 3832-3835.

**10. ACKNOWLEDGEMENTS**

Grateful acknowledgements are due to Dr H Sato, National Institute of Infectious Diseases, Tokyo, Japan for the kind donation of the hybridoma cell line.

**11. FURTHER INFORMATION**

Further information can be obtained as follows;

This material: [enquiries@nibsc.org](mailto:enquiries@nibsc.org)

WHO Biological Standards:

<http://www.who.int/biologicals/en/>

JCTLM Higher order reference materials:

<http://www.bipm.org/en/committees/jc/jctlm/>

Derivation of International Units:

[http://www.nibsc.org/standardisation/international\\_standards.aspx](http://www.nibsc.org/standardisation/international_standards.aspx)

Ordering standards from NIBSC:

<http://www.nibsc.org/products/ordering.aspx>

NIBSC Terms & Conditions:

[http://www.nibsc.org/terms\\_and\\_conditions.aspx](http://www.nibsc.org/terms_and_conditions.aspx)

**12. CUSTOMER FEEDBACK**

Customers are encouraged to provide feedback on the suitability or use of the material provided or other aspects of our service. Please send any comments to [enquiries@nibsc.org](mailto:enquiries@nibsc.org)

**13. CITATION**

In all publications, including data sheets, in which this material is referenced, it is important that the preparation's title, its status, the NIBSC code number, and the name and address of NIBSC are cited and cited correctly.

**14. MATERIAL SAFETY SHEET**

Classification in accordance with Directive 2000/54/EC, Regulation (EC) No 1272/2008: Not applicable or not classified

Physical and Chemical properties	
Physical appearance: Liquid	Corrosive: No
Stable: Yes	Oxidising: No
Hygroscopic: No	Irritant: No
Flammable: No	Handling: See caution, Section 2
Other (specify): Contains material of mouse origin	
Toxicological properties	
Effects of inhalation:	Not established, avoid inhalation
Effects of ingestion:	Not established, avoid ingestion
Effects of skin absorption:	Not established, avoid contact with skin
Suggested First Aid	
Inhalation:	Seek medical advice
Ingestion:	Seek medical advice



Contact with eyes: Wash with copious amounts of water. Seek medical advice
Contact with skin: Wash thoroughly with water.
<b>Action on Spillage and Method of Disposal</b>
Spillage of vial contents should be taken up with absorbent material wetted with an appropriate disinfectant. Rinse area with an appropriate disinfectant followed by water. Absorbent materials used to treat spillage should be treated as biological waste.

#### 15. LIABILITY AND LOSS

In the event that this document is translated into another language, the English language version shall prevail in the event of any inconsistencies between the documents.

Unless expressly stated otherwise by NIBSC, NIBSC's Standard Terms and Conditions for the Supply of Materials (available at [http://www.nibsc.org/About\\_Us/Terms\\_and\\_Conditions.aspx](http://www.nibsc.org/About_Us/Terms_and_Conditions.aspx) or upon request by the Recipient) ("Conditions") apply to the exclusion of all other terms and are hereby incorporated into this document by reference. The Recipient's attention is drawn in particular to the provisions of clause 11 of the Conditions.

#### 16. INFORMATION FOR CUSTOMS USE ONLY

<b>Country of origin for customs purposes*:</b> United Kingdom * Defined as the country where the goods have been produced and/or sufficiently processed to be classed as originating from the country of supply, for example a change of state such as freeze-drying.
<b>Net weight:</b> 0.4 g
<b>Toxicity Statement:</b> Non-toxic
<b>Veterinary certificate or other statement</b> if applicable. <b>Attached:</b> No