



**Influenza Reagent**  
**Influenza Anti-A/Perth/16/09-like HA serum**  
**NIBSC code: 10/182**  
**Instructions for use**  
**(Version 1.0, Dated 17/09/2010)**

## 1. INTENDED USE

Influenza antiserum reagent 10/182 is prepared for single radial diffusion assay of A/Perth/16/09-like antigens using an appropriate NIBSC antigen reagent.

The antiserum reagent was prepared in sheep 526, 527 and 528 to the purified HA of A/Victoria/210/09 (NYMCX-187). The HA antigens were extracted from purified virus by treatment with bromelain and purified by sedimentation on sucrose gradients (Brand, CN and Skehel, JJ, Nature, New Biology, 1972, 238, 145-147).

## 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.

The immunization schedule for all sheep was as follows: One dose of approximately 50µg of A/Victoria/210/09 (NYMCX-187) HA with Freund's Complete Adjuvant (FCA) was given intramuscularly, followed two weeks later with a 10 microgram dose of including Freund's Incomplete Adjuvant (FIA). Four weeks after the initial immunization, serum was collected and sodium azide (0.05% w/v) added. The serum was then treated by an APHIS approved method for the inactivation of FMDV.

The serum was then diluted 1:4 with PBS buffer containing sodium azide (0.05% w/v) and filled into vials in 2ml volumes.

## 5. STORAGE

+2-8°C

**Please note: because of the inherent stability of lyophilized material, NIBSC may ship these materials at ambient temperature.**

## 6. DIRECTIONS FOR OPENING

Vials have a 'flip-up' circular cap. Either on the cap or the collar of the vial, there is an indication of the point at which to lever off the cap. This exposes an area of the stopper through which reconstitution and withdrawal of the preparation can be made using a hypodermic needle and syringe. If use of a pipette is preferred, then fully remove the metal collar using, for example, forceps, taking care to avoid cuts by wearing appropriate gloves. Remove the stopper for access. Care should be taken to prevent loss of the contents.

## 7. USE OF MATERIAL

For the assay of antigens containing 20-50 micrograms of HA activity in 1ml, approximately 12µl of the undiluted reagent should be added to 1ml agarose. It may be necessary to change the antiserum concentrations according to local laboratory conditions.

Antiserum Reagent 10/182 should be used according to the method described by Wood, JM, Schild, GC, Newman, RW and Seagroatt, VA. Journal of Biological Standardisation, 1977, 5, 2.

## 8. STABILITY

It is the policy of WHO not to assign an expiry date to their international reference materials. They remain valid with the assigned potency and status until withdrawn or amended.

Reference materials are held at NIBSC within assured, temperature-controlled storage facilities. Reference Materials should be stored on receipt as indicated on the label. Once reconstituted, diluted or aliquoted, users should determine the stability of the material according to their own method of preparation, storage and use.

NIBSC follows the policy of WHO with respect to its reference materials.

Users who have data supporting any deterioration in the characteristics of any reference preparation are encouraged to contact NIBSC. Reference materials are held at NIBSC within assured, temperature-controlled storage facilities. Reference Materials should be stored on receipt as indicated on the label.

## 9. REFERENCES

None

## 10. ACKNOWLEDGEMENTS

None

## 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 Sheep Serum and Sodium Azide (0.05% w/v)	
<b>Toxicological properties</b>	
Effects of inhalation:	Not established, avoid inhalation
Effects of ingestion:	Not established, avoid ingestion
Effects of skin absorption:	Not established, avoid contact with skin
<b>Suggested First Aid</b>	
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 ampoule 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> 2g
<b>Toxicity Statement:</b> Non toxic
<b>Veterinary certificate or other statement</b> if applicable.
<b>Attached:</b> Yes SH526 SH526a SH527 SH527a SH528 SH528a



Royal Veterinary College  
University of London

Lucy Whitfield  
Named Veterinary Surgeon  
Royal Veterinary College  
Royal College Street  
LONDON  
NW1 0TU

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### VETERINARY CERTIFICATE OF ANIMAL HEALTH

This is to certify that I have today examined a sheep with ear tag number: UK 265 852 202 [Virology no. SH526], which has been used in the production of blood antiserum between 29<sup>th</sup> July 2010 and 24<sup>th</sup> August 2010. Both the ear tag number and the animal's record show that it is of UK origin.

This animal was a breeding ewe which became surplus to requirements. In my opinion at the time of clinical examination, the ewe was in good health and showed no clinical signs of infectious disease.



Lucy Whitfield MA VetMB DLAS MRCVS  
Named Veterinary Surgeon

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Lucy Whitfield MA VetMB DLAS MRCVS  
Phone/Fax 020 7468 5333 Mobile: 07778 332464  
Email: <lwhitfield@rvc.ac.uk>



### Foot and Mouth Disease Virus Inactivation Certificate

This is to certify that serum collected from Sheep with ear tag number:  
UK 265 852 202 (Virology no.SH526) has been treated by an APHIS approved  
method for inactivation of Foot and Mouth Disease Virus (FMDV). The  
treatment method used was maintenance of pH5.5 or lower for a minimum of 30  
minutes.



Dr Philip Minor  
Deputy Director  
National Institute for Biological Standards and Control

National Institute for Biological Standards and Control – Assuring the quality of biological medicines  
Blanche Lane, South Mimms, Potters Bar, Hertfordshire, EN6 3QG, United Kingdom  
Tel +44 (0)1707 641000 Fax +44 (0)1707 641050 [www.nibsc.ac.uk](http://www.nibsc.ac.uk)  
A World Health Organization Laboratory for Biological Standards





Royal Veterinary College  
University of London

Lucy Whitfield  
Named Veterinary Surgeon  
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Royal College Street  
LONDON  
NW1 0TU

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### VETERINARY CERTIFICATE OF ANIMAL HEALTH

This is to certify that I have today examined a Sheep with ear tag number: UK 265 852 292 [Virology no. SH527], which has been used in the production of blood antiserum between 29<sup>th</sup> July 2010 and 24<sup>th</sup> August 2010. Both the ear tag number and the animals' record show that it is of UK origin.

This animal was a breeding Ewe which became surplus to requirements. In my opinion at the time of clinical examination, the ewe was in good health and showed no clinical signs of infectious disease.



Lucy Whitfield MA VetMB DLAS MRCVS  
Named Veterinary Surgeon

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Lucy Whitfield MA VetMB DLAS MRCVS  
Phone/Fax 020 7468 5333 Mobile: 07778 332464  
Email: <lwhitfield@rvc.ac.uk>



### Foot and Mouth Disease Virus Inactivation Certificate

This is to certify that serum collected from Sheep with ear tag number:  
UK 265 852 292 (Virology no.SH527) has been treated by an APHIS approved  
method for inactivation of Foot and Mouth Disease Virus (FMDV). The  
treatment method used was maintenance of pH5.5 or lower for a minimum of 30  
minutes.



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NW1 0TU

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### VETERINARY CERTIFICATE OF ANIMAL HEALTH

This is to certify that I have today examined a sheep with ear tag number: UK 265 852 271 [Virology no. SH528], which has been used in the production of blood antiserum between 29<sup>th</sup> July 2010 and 24<sup>th</sup> August 2010. Both the ear tag number and the animal's record show that it is of UK origin.

This animal was a breeding ewe which became surplus to requirements. In my opinion at the time of clinical examination, the ewe was in good health and showed no clinical signs of infectious disease. Incidental findings were a scant muco-purulent discharge from the left nostril and worn incisors.



Lucy Whitfield MA VetMB DLAS MRCVS  
Named Veterinary Surgeon

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Lucy Whitfield MA VetMB DLAS MRCVS  
Phone/Fax 020 7468 5333 Mobile: 07778 332464  
Email: <lwhitfield@rvc.ac.uk>



### Foot and Mouth Disease Virus Inactivation Certificate

This is to certify that serum collected from Sheep with ear tag number:  
UK 265 852 271 (Virology no.SH528) has been treated by an APHIS approved  
method for inactivation of Foot and Mouth Disease Virus (FMDV). The  
treatment method used was maintenance of pH5.5 or lower for a minimum of 30  
minutes.



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