Medicines & Healthcare products Regulatory Agency

NIBSC Confidence in Biological Medicines

Influenza Reagent
Influenza anti N1 Neuraminidase serum (A/Victoria/4897/2022)
NIBSC code: 23/208
Instructions for use
(Version 2.0, Dated 29/08/2025)

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1. INTENDED USE

Influenza antiserum reagent 23/208 is prepared in sheep for neuraminidase identity tests.

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 antiserum was prepared in sheep SH820 and SH821, immunised with NIBRG-441 (H7N1) virus. NIBRG-441 is a reassortant developed at NIBSC with the HA gene from A/equine/Prague/1/1956 (H7N7), the NA gene from A/Victoria/4897/2022 (H1N1) and the six internal genes from A/PR/8/34 (H1N1). The cleavage site motif in the HA gene has been modified to a monobasic cleavage site. One dose of approximately 500 micrograms of inactivated purified whole virus with Freund's complete adjuvant (FCA) was given intramuscularly. A further dose of approximately 100 micrograms, with Freund's incomplete adjuvant (FIA), was given after two weeks. This was followed by six further doses of 100 micrograms with FIA.
Nine weeks after the initial immunization, serum was collected and sodium azide (0.05% w/v) was added.
For the inactivation of FMDV the antiserum was treated by maintenance of pH 5.5 (or lower) for at least 30 minutes followed by restoration of the original pH. The sera were pooled and then filled into vials in 1 ml volume.

5. STORAGE

+2-8ºC
However, if it is intended to store the reagent for long periods i.e. >2 years, they may be stored at -20ºC. The antiserum can be frozen and thawed without any adverse impact on its use.

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

Reagent 23/208 should be used in tests of neuraminidase identity, such as the neuraminidase inhibition (NI) test of Aymard-Henry M, Coleman MT, Dowdle WR, Laver WG, Schild GC and Webster RG. Bull WHO, 1973, 48, 199-202..

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.

9. REFERENCES

None

10. ACKNOWLEDGEMENTS

None

11. FURTHER INFORMATION

Further information can be obtained as follows;
This material: 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
Ordering standards from NIBSC:
http://www.nibsc.org/products/ordering.aspx
NIBSC Terms & Conditions:
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

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.

National Institute for Biological Standards and Control,
Potters Bar, Hertfordshire, EN6 3QG. T +44 (0)1707 641000, nibsc.org
WHO International Laboratory for Biological Standards,
UK Official Medicines Control Laboratory

Attached: Yes SH820, SH821

14. MATERIAL SAFETY SHEET

Classification in accordance with Directive 2000/54/EC, Regulation (EC) No 1272/2008: 1

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): (0.05% w/v)	Contains Sheep Serum and Sodium Azide
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.
Action on Spillage and Method of Disposal	
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 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

Country of origin for customs purposes*: 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.
Net weight: 1g
Toxicity Statement: Non toxic
Veterinary certificate or other statement if applicable.

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WHO International Laboratory for Biological Standards,
UK Official Medicines Control Laboratory

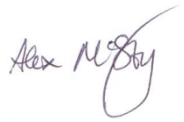
Royal Veterinary College
University of London

Alex McSloy
Named Veterinary Surgeon
Royal Veterinary College
Royal College Street
LONDON
NW1 0TU

VETERINARY CERTIFICATE OF ANIMAL HEALTH

This is to certify that I have examined a Sheep with ear tag number: UK 014795408396 [Virology no. SH820], which has been used in the production of blood antiserum between 26th July 2023 and 25th September 2023. 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. A tuberculin skin test was performed on this animal between the 11th and 14th September 2023 and was negative.
In my opinion at the time of clinical examination, the ewe was in good health and showed no clinical signs of infectious disease.



Alex McSloy MA VetMB DipACVIM PhD MRCVS
Named Veterinary Surgeon

Date signed: 25th September 2023

Alex McSloy
Named Veterinary Surgeons (NVS) Group
The Royal Veterinary College, Royal College Street, London NW1 0TU
Tel: +44 (0)1707 666333, E-mail: amcsloy@rvc.ac.uk

Royal Veterinary College
University of London

Alex McSloy
Named Veterinary Surgeon
Royal Veterinary College
Royal College Street
LONDON
NW1 0TU

VETERINARY CERTIFICATE OF ANIMAL HEALTH

This is to certify that I have examined a Sheep with ear tag number: UK 014795405729 [Virology no. SH821], which has been used in the production of blood antiserum between 26th July 2023 and 25th September 2023. 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. A tuberculin skin test was performed on this animal between the 11th and 14th September 2023 and was negative.
In my opinion at the time of clinical examination, the ewe was in good health and showed no clinical signs of infectious disease.

Alex McSloy MA VetMB DipACVIM PhD MRCVS
Named Veterinary Surgeon

Date signed: 25th September 2023

Alex McSloy
Named Veterinary Surgeons (NVS) Group
The Royal Veterinary College, Royal College Street, London NW1 0TU
Tel: +44 (0)1707 666333, E-mail: amcsloy@rvc.ac.uk