Medicines & Healthcare products Regulatory Agency

NIBSC Confidence in Biological Medicines

Influenza Reagent
Influenza Virus Infectious NIB-124C H1N1v (A/Hessen/47/2020)
NIBSC code: 23/270
Instructions for use
(Version 3.0, Dated 17/02/2026)

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1. INTENDED USE

Candidate vaccine virus NIB-124C (H1N1v) reagent, a reassortant of A/Hessen/47/2020 and NYMC X-157 (H3N2), which was processed in 250µl volumes as liquid stock. The derivation and known passage history of 25/284 are attached.

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 ampoule contains 250µl (nominal) of infectious influenza virus as allantoic fluid from SPF embryonated hen's eggs.

5. STORAGE

Store in the dark at -70°C or below.
Material type: Liquid – will be shipped according to the storage and shipping conditions of the product

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

Ready to use.

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.

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

9. REFERENCES

N/A

10. ACKNOWLEDGEMENTS

N/A

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:
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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.

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: Clear liquid		Corrosive:	No
Stable:	Yes	Oxidising:	No
Hygroscopic:	No	Irritant:	No
Flammable:	No	Handling: See caution, Section 2	
Other (specify):	Live influenza virus		

Toxicological properties	
Effects of inhalation:	Likelihood of influenza virus infection
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 virucidal agent. Rinse area with an appropriate virucidal agent followed by water. Absorbent materials used to treat spillage should be treated as biological waste.

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

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: 0.25g per vial
Toxicity Statement: Toxicity not assessed
Veterinary certificate or other statement if applicable. **Attached:** No

Derivation of NIB-124C H1N1v (A/Hessen/47/202)

- Strain: A/Hessen/47/2020
- Received from the Crick Institute London: E1/E2
- Passages undertaken at MHRA: one; E1/E2/E1 45880
- Genetic analysis: 5:3 with; PR8 "M, NP, PA, NS and PB2" genes

Mixed Infection: A/Hessen/47/2020 (10^{-2}) x NYMC X-157 (10^{-5})
↓ HA Titre: 1024
1st Antiserum passage: Inoculum 10^{-3} with NYMC X-157 antiserum
↓ HA Titre: 1024
2nd Antiserum passage: Inoculum 10^{-3} with NYMC X-157 antiserum
↓ HA Titre: 512
3rd passage: Inoculum 10^{-7}
↓ HA Titre: 2048
4th passage: Inoculum 10^{-8}
↓ HA Titre: 2048
Final amplification: Inoculum 10^{-5}
HA Titre: 2048
Lot: 46150

Total number of passages since mixed infection= E6
SPF eggs were used for all passages.

Passage History of NIB-124C H1N1v (A/Hessen/47/2020)

Cumulative number of passages	Passage numbers at each stage	Lot	Laboratory
E1	E1	Unknown	Robert Koch Institute
E3	E1/E2	Unknown	Crick Institute, UK
E4	E1/E2/E1	45880	MHRA, UK
E10	E1/E2/E7	46150*	MHRA, UK

* The HA titre of this virus using 0.7% turkey red blood cells is 2048. The infectious titre is unknown.

Sterility: no visible contamination was detected in a variety of media (tryptose soya broth, thioglycolate broth, Sabouraud's broth and blood agar plates) after 14 days incubation.

The HA and NA sequences of this virus are available at GISAID with the accession number EPI_ISL_539893.

This influenza A virus originated from a zoonotic swine influenza case, and the developed CVV has not had attenuation assessed using the ferret model.

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