Medicines & Healthcare products Regulatory Agency

NIBSC Confidence in Biological Medicines

WHO International Standard
1st Infliximab Antibody Reference Panel
NIBSC code: 22/272
Instructions for use
(Version 1.0, Dated 26/01/2023)

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1. INTENDED USE

The International Reference Panel of Infliximab anti-drug antibodies (ADAs), comprising two monoclonal antibodies, is intended to facilitate the development, characterization and validation of infliximab anti-drug antibody assays. Both antibodies can be used for assay selection and for monitoring assay performance.
The panel contains:
19/234 - a high affinity, neutralizing human IgG1, intended for calibration of in-house and commercially available anti-infliximab preparations, which has been assigned an arbitrary unitage for binding activity and neutralising activity. This would facilitate comparison and harmonization of results across infliximab ADA assays.
19/232 – a high affinity, neutralizing human IgG4 (stabilised mutein) with fast dissociation rate intended for assessing the suitability of the ADA assays for detecting ADAs with fast dissociation; no unitage is assigned to this reference preparation.
Detailed information on these antibodies can be found in the collaborative study report for the 1st WHO International Reference Panel for Infliximab anti-drug antibodies.

2. CAUTION

The material is not of human or bovine origin. This preparation is not for administration to humans or animals in the human food chain.
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

19/234 - 50,000 IU/ampoule for binding activity;
50,000 IU/ampoule for neutralizing activity
19/232 - No unitage is assigned to this antibody.

4. CONTENTS

Country of origin of biological material: France.
Each ampoule contains the residue after freeze-drying of 1.0 ml of a solution that contained:

50.0 µg Infliximab antibody produced in CHO cells
10mM L-Glutamic acid
4% Mannitol
2% Sucrose
0.01%Tween20

The material has not been sterilised and contains no bacteriostat.

5. STORAGE

Unopened ampoules should be stored at –20°C.

If stored at 4°C or room temperature following reconstitution it is strongly advised to use the material within 24 hours. For longer storage post-reconstitution please keep the material at –20°C.

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

6. DIRECTIONS FOR OPENING

DIN ampoules have an 'easy-open' coloured stress point, where the narrow ampoule stem joins the wider ampoule body. Various types of ampoule breaker are available commercially. To open the ampoule, tap the ampoule gently to collect material at the bottom (labelled) end and follow manufactures instructions provided with the ampoule breaker.

7. USE OF MATERIAL

No attempt should be made to weigh out any portion of the freeze-dried material prior to reconstitution
Reconstitution: dissolve the total contents in 1ml of sterile distilled water. For further dilutions, use a suitable buffer solution with carrier protein (free of peptidase), to minimise loss by surface adsorption.

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.
It is the policy of WHO not to assign an expiry date to their international reference materials. Accelerated degradation studies have indicated that this material is suitably stable, when stored at –20°C or below, for the assigned values to remain valid until the material is withdrawn or replaced. These studies have also shown that the material is suitably stable for shipment at ambient temperature without any effect on the assigned values.
Users who have data supporting any deterioration in the characteristics of any reference preparation are encouraged to contact NIBSC.

9. REFERENCES

This standard was produced under WHO Guidelines cited in the WHO Technical Reports Series, No 932, 2006, Annex 2.

Report on a Collaborative Study for proposed 1st WHO International Reference Panel for Infliximab anti-drug antibodies https://www.who.int/publications/m/item/who-bs-2022.2430

10. ACKNOWLEDGEMENTS

We are thankful to the ABIRISK consortium (funded by the Innovative Medicines Initiative program, EU) for their donation of the antibodies and to the study participants for their support of the study

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

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

World Health Organization

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.

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: Freeze-dried powder	Corrosive: No
Stable: Yes	Oxidising: No
Hygroscopic: No	Irritant: No
Flammable: No	Handling: See caution, Section 2
Other (specify):	
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: 5g
Toxicity Statement: Toxicity not assessed
Veterinary certificate or other statement if applicable. **Attached:** No

17. CERTIFICATE OF ANALYSIS

NIBSC does not provide a Certificate of Analysis for WHO Biological Reference Materials because they are internationally recognised primary reference materials fully described in the instructions for use. The reference materials are established according to the WHO Recommendations for the preparation, characterization and establishment of international and other biological reference standards http://www.who.int/bloodproducts/publications/TRS932Annex2_Inter_biolefstandardsrev2004.pdf (revised 2004). They are officially endorsed by the WHO Expert Committee on Biological Standardization (ECBS) based on the report of the international collaborative study which established their suitability for the intended use.