International Ref. Reagent
WHO Reference Reagent Low anti-EV71 Serum (Human)
NIBSC code: 13/238
Instructions for use
(Version 1.0, Dated 18/03/2016)

1. INTENDED USE
The International Reference Reagent is intended to help laboratories
standardize virus neutralization methods to measure antibody levels
against EV71 in human sera. These assays might be suitable for the
evaluation of the immunogenicity of EV71 vaccines and for the assessment
of the seroprevalence of human populations against EV71 virus.

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

The preparation contains material of human origin, and either the final
product or the source materials, from which it is derived, have been
tested and found negative for HBsAg, anti-HIV and HCV RNA. 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
The WHO Reference Reagent 13/238 for anti-EV71 serum Low
(Human) for use in standardization of virus neutralization assays has an
assigned potency of 300 IU/ampoule.

It is recommended the contents of each vial be reconstituted in 0.5ml
distilled water.

4. CONTENTS
Country of origin of biological material: China.
Each ampoule contains a freeze-dried residue comprising (under an
atmosphere of nitrogen) human serum containing antibodies against
EV71 virus. Each ampoule should be reconstituted in 0.5ml of distilled
water.

Preparation of the Standard
The RR (NIBSC number 13/238) was prepared from pooled human sera
provided by NIFDC. The material was filled and lyophilized on 14/02/2014.

5. STORAGE
The material has been stored at ~-20C since production. It is
recommended that samples be used as soon after receipt was possible.

Please note: because of the inherent stability of lyophillized
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.

WHO reference reagent 13/238 for anti-EV71 serum Low (Human) for
use in standardization of virus neutralization assays. It should be used as
a test refference to access assay sensitivity to ensure low levels of EV71
antibodies are detectable.

It is recommended the contents of each vial be reconstituted in 0.5ml
distilled water.

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
Report on the WHO collaborative study to establish the 1st International
Standard for anti-EV71 serum (Human). WHO/BS/2015.2267

10. ACKNOWLEDGEMENTS
Collaborative study participants

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.bi.nlm.org/encommittees/jc/jctlm/
Derivation of International Units:
http://www.nibsc.org/standardisation internacional_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.

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

<table>
<thead>
<tr>
<th>Physical and Chemical properties</th>
<th></th>
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<tbody>
<tr>
<td>Physical appearance:</td>
<td>Freeze-dried powder</td>
<td>Corrosive:</td>
</tr>
<tr>
<td>Stable:</td>
<td>Yes</td>
<td>Oxidising:</td>
</tr>
<tr>
<td>Hygroscopic:</td>
<td>No</td>
<td>Irritant:</td>
</tr>
<tr>
<td>Flammable:</td>
<td>No</td>
<td>Handling: See caution, Section 2</td>
</tr>
<tr>
<td>Other (specify):</td>
<td>Contains material of human origin</td>
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<table>
<thead>
<tr>
<th>Toxicological properties</th>
<th></th>
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<tbody>
<tr>
<td>Effects of inhalation:</td>
<td>Not established, avoid inhalation</td>
</tr>
<tr>
<td>Effects of ingestion:</td>
<td>Not established, avoid ingestion</td>
</tr>
<tr>
<td>Effects of skin absorption:</td>
<td>Not established, avoid contact with skin</td>
</tr>
</tbody>
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National Institute for Biological Standards and Control,
Potters Bar, Hertfordshire, EN6 3QG, Tel +44 (0)1707 641000, nibsc.org
WHO International Laboratory for Biological Standards,
UK Official Medicines Control Laboratory
Suggested First Aid

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<tbody>
<tr>
<td>Inhalation:</td>
<td>Seek medical advice</td>
</tr>
<tr>
<td>Ingestion:</td>
<td>Seek medical advice</td>
</tr>
<tr>
<td>Contact with eyes:</td>
<td>Wash with copious amounts of water. Seek medical advice</td>
</tr>
<tr>
<td>Contact with skin:</td>
<td>Wash thoroughly with water</td>
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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

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<tr>
<td>Country of origin for customs purposes*: United Kingdom</td>
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<tr>
<td>* 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.</td>
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<tr>
<td>Net weight: 0.5g</td>
</tr>
<tr>
<td>Toxicity Statement: Non-toxic</td>
</tr>
<tr>
<td>Veterinary certificate or other statement if applicable.</td>
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<tr>
<td>Attached: No</td>
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</tbody>
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