Dia.Pro
Diagnostic
BioProbes

Extracted from

Device Master File

HDV IgM

Ref. DIM.CE

DIA.PRO Diagnostic Bioprobes S.r.l.
Sede legale e lab.: Via G.Carducci, 27 – 20099 Sesto S.Giovanni (MI) – Italia
Tel. +39 02 27007161/6450 • Fax +39 02 44386771 • http://www.diapro.it • E-mail: info@diapro.it
Capitale sociale €50.000,00 I.V. – P.IVA: 11924660159 – Reg. Imp. 11924660159 – REA 1509959

[redacted]

2. PRODUCT INFORMATION

2.1. Product description including variants (configuration) and accessories

2.1.1. Product description

Specifically, the devise is an Enzyme Linked Immuno Sorbent Assay (or ELISA) intended to be used for the qualitative determination of anti Hepatitis Delta Virus IgM antibodies in human plasma and sera derived from patients suspected to carry acute HDV infection.

The kit is composed of a box that contains all the components and the instructions for use necessary for 96 tests.

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The device contains the following components:

1. Microplate
2. Negative Control
3. Positive Control
4. Calibrator
5. Wash buffer concentrate
6. Enzyme conjugate 20 X
7. HDV Antigen
8. HDV Antigen Diluent
9. Chromogen/Substrate
10. Stop solution
11. Specimen Diluent
12. Plate sealing foils
13. Package insert

The kit has to be used in combination with the following essential tools, not supplied by Dia.Pro Diagnostic Bioprobes srl.:

- Automated ELISA Microplate washer
- ELISA Microplate reader
- ELISA Microplate incubator
- Precision micropipettes and disposable tips

2.1.2. Intended use

This device DIM.CE is a qualitative test to determinate IgM antibodies to Toxoplasma gondii in human plasma and sera.
The DIM.CE test is intended exclusively for *in vitro* diagnostic use.

2.1.3. Intended users

The kit DIM.CE has to be used by skilled and properly trained technical personnel only, under the supervision of a medical doctor responsible of the laboratory.
The kit is intended to be used to test human sera and plasma, the package insert reports measures of personal and environmental safety (gloves, glasses and lab coats) to be used by the laboratory personnel when carrying out the assay.
Procedures of waste handling and disposal are also given to the end user.

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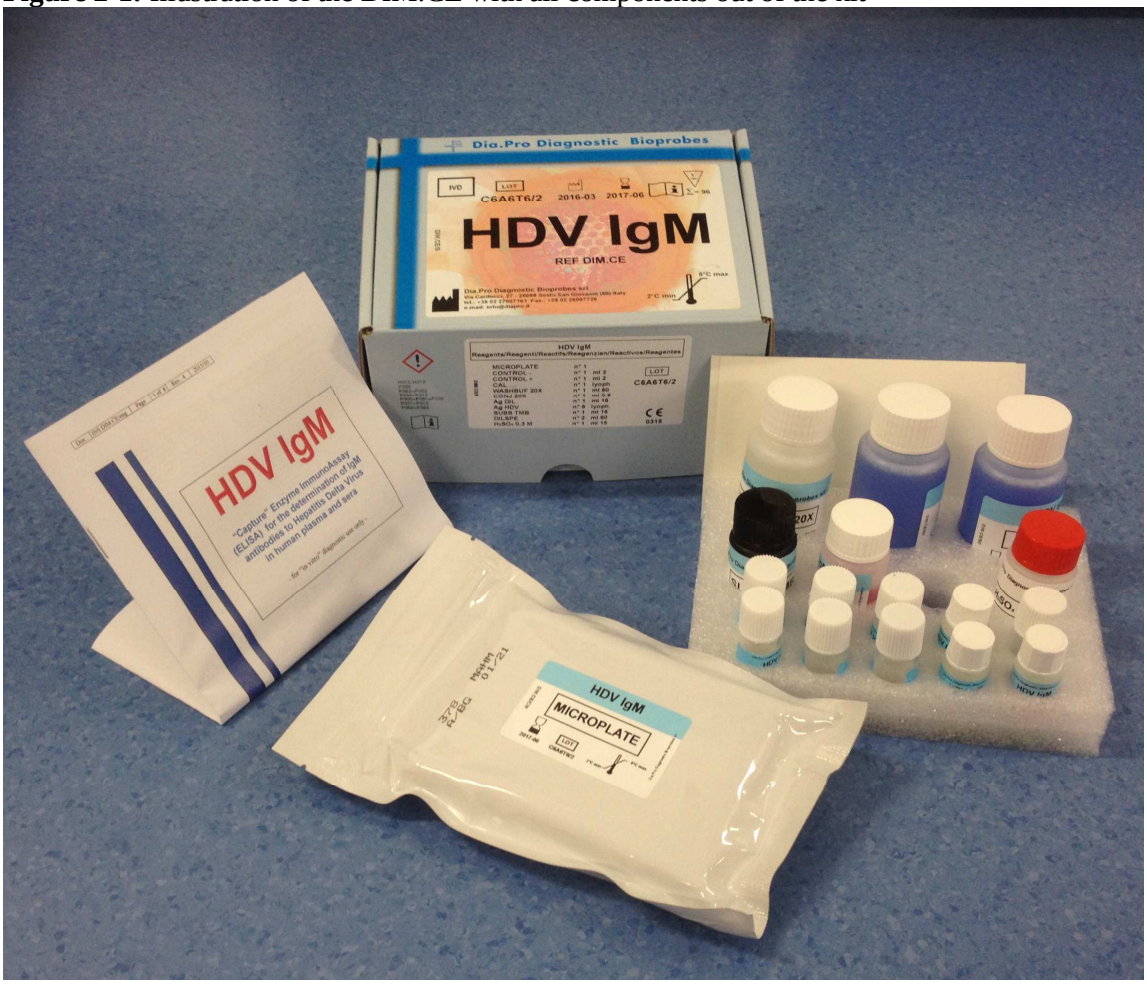
2.1.4. Photographs of kit

The standard device is intended as 96 tests format code DIM.CE.
A picture of the Product is reported in the Figure 2-1

Figure 2-1: Illustration of the DIM.CE with all components out of the kit



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2.1.5. Principle of the assay

The method of analysis used is based on the following principle.
Microplates are coated with a monoclonal anti-hIgM antibody that in the 1st incubation "captures" specifically this class of antibodies.
After washing out all the other components of the sample, in the 2nd incubation bound anti HDV IgM are detected by the addition of recombinant HDV antigen, immunocomplexed with a specific antibody, labeled with peroxidase (HRP).
After washing, the enzyme captured on the solid phase, acting on the substrate/chromogen mixture, generates an optical signal that is proportional to the amount of IgM antibodies present in the sample.

2.1.6. Components of the kit

The device HDV IgM consists of the following dedicated components, shown in Table 2-2.

Table 2-2: Description of components of the device

Number of tests	**96**
Code	**DIM.CE**
1.Microplate	n°1
2.Negative Control	1x2ml/vial
3.Positive Control	1x2ml/vial
4.Calibrator	n°1 vial
5. Wash buff conc	1x60ml/bottle
6.Enzyme Conjugate 20x	1x6 vials
7. HDV Antigen	1x0.8ml/vial
8. HDV Antigen Diluent	1x16ml/vial
9. Specimen Diluent	2x60ml/vial
10.Chrom/Substrate	1x16ml/vial
11.Sulphuric Acid	1x15ml/vial
12.Plate seal foils	n° 2
13.Pack. insert	n° 1

No variants to the standard format of the device are present.

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2.1.7. Specimen collection

The device has been validated for use with serum and plasma that are prepared using standard techniques of preparation of samples for clinical laboratory analysis.

2.1.7.1. Serum and plasma collection and transport

Blood is drawn aseptically by venipuncture and plasma or serum is prepared using standard techniques of preparation of samples for clinical laboratory analysis. No influence has been observed in the preparation of the sample with citrate, EDTA and heparin.
Samples have to be clearly identified with codes or names in order to avoid misinterpretation of results.
Haemolysed (red) and visibly hyperlipemic ("milky") samples have to be discarded as they could generate false results. Samples containing residues of fibrin or heavy particles or microbial filaments and bodies should be discarded as they could give rise to false results.
Sera and plasma can be stored at +2°..8°C for up to five days after collection. For longer storage periods, samples can be stored frozen at –20°C for several months. Any frozen samples should not be frozen/thawed more than once as this may generate particles that could affect the test result.
If particles are present, centrifuge at 2.000 rpm for 20 min or filter using 0.2-0.8um filters to clean up the sample for testing.
Do not use heat inactivated samples as they could give origin to false reactivity.

2.1.8. For instruments of automated assays: a description of the appropriate assay characteristics or dedicated assays

Any ELISA automated work station can be used following some recommendations:

- When using an ELISA automated work station, all critical steps (dispensation, incubation, washing, reading, shaking, data handling) have to be carefully set, calibrated, controlled and regularly serviced in order to match the values reported in the sections "Validation of Test" and "Assay Performances". The assay protocol has to be installed in the operating system of the unit and validated as for the washer and the reader. In addition, the liquid handling part of the station (dispensation and washing) has to be validated and correctly set. Particular attention must be paid to avoid carry over by the needles used for dispensing samples and for washing. This must be studied and controlled to minimize the possibility of contamination of adjacent wells due to strongly reactive samples, leading to false positive results. The use of ELISA automated work stations is recommended for blood screening and when the number of samples to be tested exceed 20-30 units per run.
- Dia.Pro's customer service offers support to the user in the setting and checking of instruments used in combination with the kit, in order to assure full compliance with the requirements described. Support is also provided for the installation of new instruments to be used with the kit.

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2.1.9. Product workflow

The time required to perform the test after clinical specimen collection is about 3h 20' considering that:

1- The components of the kit have to reach room temperature (about 1 hour) before their use in the assay (pre-assay operations)

2- The time required to perform the Assay procedure is about 2h 20' (washing steps excluded) according to the following Assay Scheme:

Method	**Operations**
Controls and calibrator Diluted Samples (1:200)	100 µl 100 µl
1st incubation	**60 min**
Temperature	+37°C
Wash step	4-5 cycles
Immunocomplex	100 µl
2nd incubation	**60 min**
Temperature	+37°C
Wash step	4-5 cycles
TMB/H2O2	100 µl
3nd incubation	**20 min**
Temperature	r.t.
Sulphuric Acid	100 ul
Reading OD	450nm

2.2. New *in vitro* diagnostic kits

Not applicable

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2.3. In vitro diagnostic kits already available on the market in India

2.2.1 Adverse events and field safety corrective actions

The HDV IgM device, produced from 2004, is sold worldwide through our chain of authorized distributors. We furthermore declare that no recalls of the product have been done from 2004 till now.

Moreover, the table below reports the updated number of tests of the kit HDV IgM, sold by Dia.Pro Diagnostic BioProbes s.r.l. in the last 5 years.
Complaints about this kit, as they come out from the data derived from the Commercial Department and from the "Complaint Book" of the Quality Management System of the company, are briefly reported.

Year	Tests sold	N° confirmed complaints	Description of the complaint	N° of recalls
2013	44064	0	/	0
2014	40896	0	/	0
2015	45120	0	/	0
2016	45120	0	/	0
2017	45504	0	/	0

The data reported above haven't pointed out any relevant problem connected with the use of the product.

2.2.2 Certificates

For the certificate see Annex 1.

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