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User´s Manual

Chlamydia (psittaci/ trach- omatis) Ab feline ELISA

Enzyme Immunoassay for the quantitative determination of antibodies against Chlamydia (psittaci/trachomatis) antigen in serum and plasma of cats

VET

REF DE2474

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1 INTRODUCTION

Chlamydia causes acute respiratory infection bronchitis, pneumonia or blindness and venereal infections in human beings and cats. In Feline species Chlamydia infections mostly causes eye and mouth infections. Chlamydia antigen infected or vaccinated cats produce antibodies against these Chlamydia antigens, which can be detected in an ELISA using a horseradish peroxidase (HRPO) anti-species conjugate.

2 INTENDED USE

The Chlamydia ELISA kit is designed to detect antibodies against Chlamydia antigens. To this end Chlamydia antigens are attached to the solid phase. After washing, the plates are incubated with the Cat sera to be tested. The plates are washed after incubation to remove unbound materials. A HRPO labeled anti-species conjugate is added to detect bound cat antibodies to Chlamydia antigen. After incubation and rinsing, the substrate is added and the optical density is measured at 450 nm.

3 PRINCIPLE

The test is based on the reaction of Chlamydia proteins with polyclonal cat antibodies. To this end, Chlamydia proteins have been coated to a 96 well microtiter plate. The cat serum sample is added (diluted 1:50) to the wells of the coated plate or titrated starting 1:30, 1:90, 1:270 etc. After washing, the bound cat antibodies are detected by a HRPO conjugated anti-species conjugate. The color reaction in the wells is directly related to the concentration of Chlamydia antibodies in the serum/plasma sample.

4 CONTENTS

- 1x 12 x 8 **microtiter strips**.
- 1 x strip holder.
- 1 x 20 mL **ELISA buffer**.
- 1 x 12 mL **HRPO conjugate**
- 1 x 1 mL **Weak Positive control** (ready to use)
- 1 x 1 mL **Negative control** (ready to use)
- 1 x 20 mL **Wash-solution** (200 xconcentrated), **dilute in de-ionized water before use!**
- 1 x 8 mL **Substrate A**.
- 1 x 8 mL **Substrate B**.
- 1 x 8 mL **Stop-solution**.
- 1 x Plastic cover seal.

5 HANDLING AND STORAGE OF SPECIMENS

The kit should be stored at 2 °C - 8 °C. An open packet should be used within 10 days. Samples may be used fresh or may be kept frozen below -20 °C before use. Positive and negative controls may be stored after reconstitution in aliquots at -20 °C and used until the expiry date. Avoid repeated freezing and thawing as this increases non-specific reactivity.

6 WASH PROTOCOL

In ELISAs, uncomplexed components must be removed efficiently between each incubation step. This is accomplished by appropriate washing. It should be stressed that each washing step must be carried out with care to guarantee reproducible inter- and intra-assay results. It is essential to follow the washing procedures outlined below. Washing may be done manually or with automatic equipment. Automatic washing equipment usually gives better results.

Manual washing

1. Empty each well by turning the microtiter plate upside down followed by a firm vertical downward movement to remove the buffer.
2. Fill all the wells with 250 μ L washing solution.
3. This washing cycle (1 and 2) should be carried out at least 4 times.
4. Turn the plate upside down and empty the wells with a firm vertical movement.
5. Place the inverted plate on absorbent paper towels and tap the plate firmly to remove any residual washing solution in the wells.
6. Take care that none of the wells dry out before the next reagent is dispensed.

Washing with automatic equipment

When automatic plate washing equipment is used, check that all wells are aspirated completely and that the washing solution is correctly dispensed, reaching the rim of each well during each rinsing cycle. The washer should be programmed to execute at least 4 washing cycles.

7 TEST PROTOCOL

1. Open the packet of strips and take out the strips to be used. Cover the remaining strips with a part of the provided seal and store them at +4 $^{\circ}$ C and use them within 10 days.
Wash the microtiter strip(s) with washing solution, according to washing protocol.
The washing solution provided must be diluted 200 x in de-ionized water!
2. After opening divide the positive and negative control into aliquots, and store immediately at -20 $^{\circ}$ C until use.
3. Make a 1:50 dilution of the test sample in ELISA buffer in another test plate and transfer 100 μ L to one well of the coated plate/strip.
Transfer 100 μ L of the ready to use positive and negative control, to two wells each.
It is also possible to make 3 step titrations of the samples to be tested starting 1:50, 1:150, 1:450 and 1:1350 (in this way it is possible to determine an endpoint titer)
4. Seal and incubate for 60 minutes at 37 $^{\circ}$ C.
5. Wash the plate according to the wash protocol.
6. Dispense 100 μ L of the HRPO conjugate to all wells.
7. Seal and incubate 60 minutes at 37 $^{\circ}$ C.
8. Wash the plate according to the wash protocol.
9. Mix equal parts of buffer A and buffer B with gentle shaking.
Prepare immediately before use!
Dispense 100 μ L substrate solution to each well. Incubate 15-25 minutes at room temperature (21 $^{\circ}$ C).
10. Add 50 μ L stop solution to each well; mix well.
11. Read the absorbency values immediately (within 10 minutes.!) at 450 nm.

8 PRECAUTIONS

- Handle all biological material as though capable of transmitting Chlamydia (human pathogen).
- Do not pipette by mouth.
- Do not eat, drink, smoke or prepare foods, or apply cosmetics within the designated working area.
- TMB substrate (buffer A/B) is toxic by inhalation, through contact with skin or when swallowed; observe care when handling the substrate.
- Do not use components past the expiry date and do not mix components from different serial lots.
- Optimal results will be obtained by strict adherence to this protocol. Careful pipetting and washing throughout this procedure are necessary to maintain precision and accuracy.
- Each well is ultimately used as an optical cuvette. Therefore, do not touch the under-surface of the microtiter plate and protect it from damage and dirt.

9 VALIDATION OF THE TEST





In order to confirm appropriate test conditions, the weak positive control should give an extinction ≥ 0.800 OD units. The negative control should give an OD ≤ 0.350 .

10 INTERPRETATION OF TEST RESULTS

A sample is considered positive when the measured extinction is higher than 1.6 times the OD of the negative control. The OD of the weak positive control must be higher than 0.800.

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SYMBOLS USED WITH DEMEDITEC ASSAYS

| Symbol | English | Deutsch | Français | Español | Italiano |
|---|------------------------------------|------------------------------|--|---------------------------------------|-------------------------------------|
|  | Consult instructions for use | Gebrauchsanweisung beachten | Consulter les instructions d'utilisation | Consulte las instrucciones de uso | Consultare le istruzioni per l'uso |
|  | European Conformity | CE-Konformitätskennzeichnung | Conformité aux normes européennes | Conformidad europea | Conformità europea |
|  | In vitro diagnostic device | In-vitro-Diagnostikum | Usage Diagnostic in vitro | Para uso Diagnóstico in vitro | Per uso Diagnostica in vitro |
|  | For research use only | Nur für Forschungszwecke | Seulement dans le cadre de recherches | Sólo para uso en investigación | Solo a scopo di ricerca |
|  | Catalogue number | Katalog-Nr. | Numéro de catalogue | Número de catálogo | Numero di Catalogo |
|  | Lot. No. / Batch code | Chargen-Nr. | Numéro de lot | Número de lote | Numero di lotto |
|  | Contains sufficient for <n> tests/ | Ausreichend für "n" Ansätze | Contenu suffisant pour "n" tests | Contenido suficiente para <n> ensayos | Contenuto sufficiente per "n" saggi |
|  | Storage Temperature | Lagerungstemperatur | Température de conservation | Temperatura de conservación | Temperatura di conservazione |
|  | Expiration Date | Mindesthaltbarkeitsdatum | Date limite d'utilisation | Fecha de caducidad | Data di scadenza |
|  | Legal Manufacturer | Hersteller | Fabricant | Fabricante | Fabbricante |
| Distributed by | Distributor | Vertreiber | Distributeur | Distribuidor | Distributore |
| Content | Content | Inhalt | Conditionnement | Contenido | Contenuto |
| Volume/No. | Volume / No. | Volumen/Anzahl | Volume/Quantité | Volumen/Número | Volume/Quantità |