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Validation report

IDvet EIA AGID

Agar gel immunodiffusion (AGID) for the detection of EIA anti-p26 antibodies in equine serum

- **Clear bright lines for easy reading**
- **OIE-prescribed protocol[1]**
- **May be purchased with or without agar gel**
- **24-month shelf-life**
- **Generates a clean inflexion with OIE reference serum**

Introduction

Equine infectious anaemia (EIA) is a persistent viral infection of equids, which is caused by a retrovirus and transmitted by bloodsucking insects.

The virus survives up to 4 hours in the carrier. Contaminated surgical equipment, recycled needles and syringes can transmit the disease. Mares can transmit the disease to their foals via the placenta. The risk of transmitting the disease is greatest when an infected horse is ill, as the blood levels of the virus are then highest.

The agar gel immunodiffusion (AGID) tests is accurate, reliable tests for the detection of EIA in horses

The **IDvet EIA AGID** uses a recombinant EIAV p26 antigen, which is the p26, an internal structural protein of the virus that is coded by the *gag* gene. The p26 is more antigenically stable among EIAV strains than the virion glycoproteins gp45 and gp90.

Kit components	
Recombinant EIAV-p26 antigen	3.4 ml
Positive control	10 ml

This kit is available with or without agar gel, product codes: EIA-AGID and EIA-AGID-NOGEL, respectively.

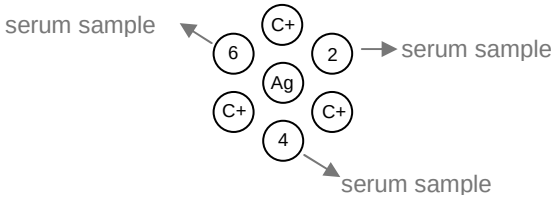
Test Principle

The agar gel immunodiffusion (AGID) test is a method whereby antigen and antibody diffuse toward each other in a semisolid medium to a point where the optimum concentration of each is reached. A band of precipitation occurs at this point.

In this test:

- Agar gel is cast and equidistant wells are cut out in agar.
- Recombinant EIAV p26 antigen is placed in the central well. The positive control and the samples to be tested are placed in the peripheral wells (see schema).
- After diffusion, EIAV p26 antigen–anti-p26 antibody complexes lead to the formation of precipitates (a whitish line visible to the naked eye).

After 24-48 hours, plates are examined, and samples are considered positive if a precipitation line forms with the antigen.



Storage conditions

The antigen and the positive control may be stored:

- at 5°C (±3°C) until the expiry date
- or indefinitely at -20°C.

Analytical sensitivity

Analytical sensitivity was tested by analysing the OIE International serum standard. This serum was kindly provided by the ANSES Dozulé.

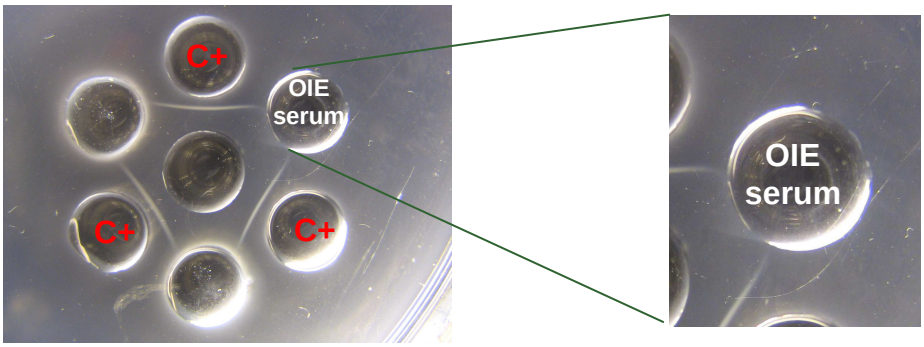


Figure 1: Analytical sensitivity of the OIE International Reference EIA Serum.

Results (Figure 1):

- The serum standard was found weakly positive each time it was tested.

Specificity

Specificity was tested on 300 horse sera from disease-free regions in France (Normady).

Results:

- All sera were found negative.

  Measured specificity: 100% ($CI_{95\%}$: 98.74 - 100%), n=300.

Sensitivity

170 horse sera from an infected herd in Argentina were tested in parallel using the IDvet EIA AGID and another commercial AGID (test A).

Results:

- 48/170 sera were found positive using the IDvet EIA AGID and test A.
- Those sera were also confirmed as positive using the ID Screen® Equine Infectious Anemia Double Antigen ELISA.

  Test agreement = 100%

Conclusion

The **IDvet EIA AGID**:

- demonstrates high specificity on disease-free sera
- shows high sensitivity

References

(1) OIE Terrestrial Manual 2013. Chapter 2.5.6. Equine Infectious Anaemia.

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