Version 29-04/24

User's Manual

Rabbit Anti-Rabies Virus IgM ELISA kit

REF **DEIA-RV2310-6**

Σ **96T**

RUO

This product is for research use only and is not intended for diagnostic use.

For illustrative purposes only. To perform the assay the instructions for use provided with the kit have to be used.

Creative Diagnostics

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PRODUCT INFORMATION

Intended Use

This kit is for detection of antibodies against Rabies virus in Rabbit serum. For in vitro research use only.

General Description

The rabies virus is a member of the Lyssavirus genus, which have helical symmetry, so their infectious particles are approximately cylindrical in shape. They are characterized by an extremely broad host spectrum ranging from plants to insects and mammals; human-infecting viruses more commonly have cubic symmetry and take shapes approximating regular polyhedron. The virus has a bullet like shape with a length of about 180 nm and a cross-sectional diameter of about 75 nm. One end is rounded or conical and the other end is planar or concave. The lipoprotein envelope carries knob-like spikes composed of Glycoprotein G. Spikes do not cover the planar end of the virion (virus particle). Beneath the envelope is the membrane or matrix (M) protein layer which may be invaginated at the planar end. The core of the virion consists of helically arranged ribonucleoprotein.

Rabies is a disease that causes acute encephalitis (inflammation of the brain) in warm-blooded animals. It is zoonotic (i.e., transmitted by animals), most commonly by a bite from an infected animal but occasionally by other forms of contact. Rabies is almost invariably fatal if postexposure prophylaxis is not administered prior to the onset of severe symptoms. Early-stage symptoms of rabies are malaise, headache and fever, progressing to acute pain, violent movements, uncontrolled excitement, depression, and hydrophobia. Finally, the patient may experience periods of mania and lethargy, eventually leading to coma. The primary cause of death is usually respiratory insufficiency. Worldwide, the vast majority of human rabies cases (approximately 97%) come from dog bites. In the United States, however, animal control and vaccination programs have effectively eliminated domestic dogs as reservoirs of rabies. In several countries, including the United Kingdom, Australia and Japan, the virus has been eradicated entirely.

Rapid and accurate laboratory diagnosis of rabies in humans and other animals are essential for timely administration of post exposure prophylaxis. Within a few hours, a diagnostic laboratory can determine whether or not an animal is rabid and inform the responsible medical personnel. The laboratory results may save a patient from unnecessary physical and psychological trauma, and financial burdens, if the animal is not rabid. The nature of rabies disease dictates that laboratory tests be standardized, rapid, sensitive, specific, economical, and reliable. The standard test for rabies testing is dFA. All rabies laboratories in the United States perform this test (post-mortem) on animals suspected of having rabies.

This ELISA kit is based on antigens prepared from whole-inactivated rabies virus subtypes 1-3. It is intended to be used as a rapid screening test for the detection of rabies viruses subypes 1-3 antibodies in serum samples of rabbits. The kit does not provide distinction between various rabies virus subtypes. The anti-rabies virus 1-3 IgG ELISA kit can also be used to test the efficacy of standards vaccines in animals and humans. Rabies vaccines: Vaxirab, Verorab, Raboral (Merial).

Assay Procedure

Allow all reagents to reach room temperature. Arrange and label required number of strips.

Step 1. Pipet 100 ul each of diluted standards, samples containing anti-Rabies IgM (diluted 1:100 or more)

and controls into wells. Mix gently and incubate at room temperature for 60 min.

Step 2. Aspirate and wash the plate four times. Add 100ul of Anti-Rabbit IgM-HRP Conjugate to all wells, mix gently and incubate at room temperature for 30 min.

Step 3. Aspirate and wash the plate five times. Add 100 ul of TMB Substrate solution to all wells, mix gently, and incubate at room temperature for 15 min.

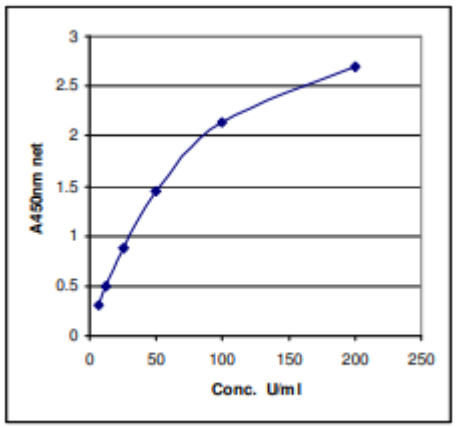
Step 4. Pipet 100 ul of stop solution into each well and mix gently (blue color turns yellow). Measure OD at A450 nm.

Interpretation Of Results

Negative sample= A450 values equal to less than the negative control; Positive= A450 values higher the –ve values

Positive control has been arbitrarily assigned 200 U/ml. It can be serially diluted (200, 100, 50, 25, 12.5, 6.25 U/ml) for measuring the anti-rabies virus IgM in units/ml.

Typical Standard Curve



Anti-Rabies IgG (Typical Curve)

Performance Characteristics

1. Rabies viruses 1-3 Antigens (mix) Pre-coated, stabilized, ready-to-use 96-well strip plate, suitable for multiple runs up to 6 months.
2. Convenient Positive and Negative serum Controls, which can be used to make 200, 100, 50, 25, 12.5, 6.25 and 0 U/ml standards
3. 100 ul samples (diluted 1:100 or more), 105 min, 3 incubation
4. Contains all necessary reagents.