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# Human Rabies Virus Protective Antibody ELISA Kit

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**Catalog Number: AK200H1**

**Package Size:96T**

## Intended use

The Human Rabies Virus Protective Antibody ELISA Kit is used for the semi-quantitative detection of human rabies virus protective antibody in serum or plasma.

For in vitro research use only.

## Principle

Briefly, flat-bottom 96-well plates are coated with Glycoprotein of rabies virus (CVS-11 strain) that captures rabies virus protective antibody in the sample. A quick wash removes any unbound particles. Captured rabies virus protective antibody is detected by Goat Anti-Human IgG pAb, which is conjugated to horseradish peroxidase (HRP). Finally, the chromogenic substrate 3, 3', 5, 5'-tetramethylbenzidine (TMB) is added. The amount of rabies virus protective antibody is proportional to the color generated in the coupled oxidation-reduction reaction compared with known amounts of standards.

## **If You have Problems, please contact:**

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Web: <http://www.anygo-pet.com/>

In order to obtain higher efficiency service, please ready to supply the lot number of the kit to us (found on the outside of the box).

## Kit Components

Reagents	Quantity	Description
96-well plate	8 wells x 12 strips	Coated with recombinant Glycoprotein (CVS11 strain) from CHO cells
Negative control (NC)	40 µL	Non-immunized serum from human
HRP conjugated pAb (100x)	120 µL	Goat Anti-Human IgG pAb
Enzyme dilution buffer	12 mL	20% calf serum-PBS buffer
Sample dilution buffer	12 mL	PBS-Triton X100
20xPBST buffer	50 mL	PBS-Tween 20
Stop buffer	6 mL	0.2M H <sub>2</sub> SO <sub>4</sub>
Substrate solution A	6 mL	H <sub>2</sub> O <sub>2</sub>
Substrate solution B	6 mL	Na Citrate buffer-TMB
Standard-1.5 IU/mL	40 µL	From EDQM
Standard-0.5 IU/mL	40 µL	From EDQM
Sealing films	2 pieces	/

## Storage Conditions

The components of the kit remain stable through the expiration date indicated on the label and package when stored at 2-8 °C, do not freeze and avoid light.

## Materials Required (Not Supplied)

1. Water: freshly distilled or deionized
2. Disposable gloves, timer and appropriate waste containers.
3. Dispensing system and/or pipette (single or multichannel), disposable pipette tips.
4. Microplate shaker or rotator (37±2°C) .
5. Microplate washer.
6. Vortex for dissolving and mixing conjugate with samples.
7. Microwell plate reader, single wavelength at 450nm or dual wavelength at 450nm and 620nm.

## Protocol

1. Before using, pre-warm all the reagents to room temperature (18~30°C).
2. **Washing buffer** dilution: dilute the 20×PBST Buffer to distilled water at 1:20 (1ml 20×PBST+19ml H<sub>2</sub>O) and mix well.
3. Dilute samples, negative control and standards (1.5 IU/mL, 0.5 IU/mL) with **Sample Dilution Buffer** in ratio of 1:20 and mix well. For each sample, add 100µL into their respective wells in the pre-coated ELISA plate (Duplicated samples are recommended). Cover the plate with sealing films. Incubate with shaking at 37°C, 200 rpm for 60 minutes.
4. Empty the samples from wells and wash all wells with prepared **Washing Buffer** (350µL/well), repeat for 3 times. Remove residual solution with paper pat (optimal).
5. Dilute HRP-conjugated pAb with **Enzyme Dilution buffer** in ratio of 1:100 and mix well. Add 100µL of diluted HRP-conjugated pAb to each well. (Careful not to touch or scratch the surface of the wells). Incubate with shaking plate at 37°C, 200rpm for 60 minutes.
6. Remove samples from wells and wash all wells with prepared **Washing Buffer**(350µL/well), repeat for 3 times. Remove residual solution with paper pat (optimal).
7. Add 50µL each of Substrate Solution A and Substrate Solution B into each well. Mix thoroughly with shaking. Incubate at room temperature for 5 minutes and avoid light.
8. Stop the reaction by adding 50µL of Stop Solution into each well.
9. Read the absorbance at 450nm and 620nm (optimal) on a plate reader within 30 minutes after adding the Stop Solution.

## Data Analysis

1. The OD value of negative control should be between 0.1 to 0.4.
2. Calculate the absorbance of OD<sub>450</sub> or (OD<sub>450</sub>-OD<sub>620</sub>) for each standard and samples.
3. Compare results of Samples against the readings of Standard-1.5 IU/mL and Standard-0.5 IU/mL to estimate the VNA titer range of samples.

## Properties

1. Precision: coefficient of variation CV (%) should not be higher than 15 % (n=10).
2. Stability: The components of the kit are left for 3 days at 37°C under accelerated destruction condition, and all performance indexes still meet the above requirements.
3. Limit of detection: less than 0.2 IU/mL

## Caution

- A. Avoid cross contamination.
- B. Follow reader measure as standard.
- C. All samples and buffers are added or removed with pipette.
- D. Do not mix reagents from different batches.