Rift Valley Fever Virus NP ELISA Development Kit

Cat.No: DEIABL24
Lot. No. (See product label)

Size

5 x 96T

Intended use

NP (Rift Valley Fever Virus) ELISA Development Kit contains the key components required for the quantitative analysis of NP (Rift Valley Fever Virus) concentrations in cell culture supernatants and serum within the range of 1 - 64 ng/mL in a sandwich ELISA format. The components supplied in this kit are sufficient to assay NP (Rift Valley Fever Virus) in five 96-well ELISA plates.

Reagents And Materials Provided

Capture Antibody: 100 µL of 1mg/ml anti-NP (Rift Valley Fever Virus) monoclonal antibody.
NP (Rift Valley Fever Virus) Standard: 50 µL of 50 µg/mL recombinant NP (Rift Valley Fever Virus).
Detection Antibody: 50 µL of biotinylated monoclonal antibody against to NP (Rift Valley Fever Virus).
Streptavidin-HRP Conjugate: 50 µL of HRP- conjugated streptavidin.

Storage

2-8°C

Plate Preparation

1. For each 96-well plate, dilute 20 µL of Capture Antibody with 10.5 mL of 1xPBS to prepare a coating solution. Immediately add 100 µL of the coating solution to each well. Seal the plate and incubate overnight at 4°C or 2 hours at 37°C.
2. Remove the coating solution by aspirating or decanting. Invert the plate and blot it briefly against clean paper towels.
3. Add 300 µL of block buffer to each well. Incubate for 2 hour at 37°C.
4. Aspirate to remove Block Buffer and wash the plate
4 times with 300 µL of Wash Buffer per well.

Reagent Preparation

1. ELISA 96-well plates
2. Block Buffer: 5% mile in PBS
3. Wash Buffer: 0.05% Tween-20 in PBS
4. Diluent: 0.05% Tween-20, 0.5% milk in PBS
5. Substrate: TMB Peroxidase Substrate
6. Stop Solution: 2N Sulfuric Acid

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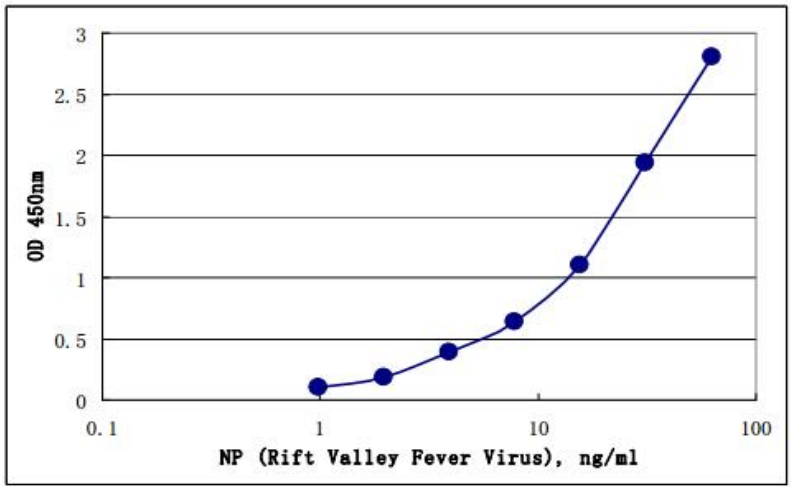
*Alternatively, these could be purchased - ELISA Plate/Buffer/Substrate Kit.

Assay Procedure

1. **Standard/Sample**: Dilute standard with Diluent to eight concentrations (64 ng/mL, 32 ng/mL, 16 ng/mL, 8 ng/mL, 4 ng/mL, 2 ng/mL, 1 ng/mL, and 0 ng/mL). Immediately add 100 µL of Standard and sample to each well in triplicate. Incubate for 1 hour at 37°C.
2. **Detection**: Aspirate and wash plate 4 times. Dilute 10 µL of Detection Antibody with 10.5 mL of Diluent to prepare a detection solution. Add 100 µL of the detection solution into each well. Incubate for 1 hour at 37°C.
3. **Streptavidin Peroxidase**: Aspirate and wash plate 4 times. Dilute 10 µL of Streptavidin-HRP Conjugate with 10.5 mL of Diluent. Add 100 µL into each well. Incubate at 37°C for 30 minutes.
4. **Substrate/Stop**: Aspirate and wash plate 4 times. Add 100 µL of TMB Peroxidase Substrate into each well. Incubate at 37°C for 20 minutes. Then add 100 µL of Stop Solution to each well.
5. **Read**: Determine the optical density of each well within 30 minutes, using a microplate reader set to 450nm.
6. **Analysis**: Average the triplicate reading for each standard, control, and sample and subtract the average zero standard optical density. Create a standard curve by reducing the data using computer software capable of generating a four parameter logistic (4-PL) or other curve-fit. The NP (Rift Valley Fever Virus) concentration in sample can be determined by regression analysis. If samples have been diluted, the concentration calculated from the standard curve must be multiplied by the dilution factor.

Typical Standard Curve



Detection Range

1 - 64 ng/mL

References

John R. Crowther. The ELISA Guidebook (Methods in Molecular Biology), Humana Press, 2000.

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