

BIOINCELL

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Viro-Capture™ Rotavirus Detection Kit

Catalog No. VC-R001

Size : 1 x 96well

Introduction

Rotavirus is the most important cause of acute viral gastroenteritis in early childhood throughout the world. In temperate climate, rotavirus infection generally occurs in winter season. Rotavirus infection occurs by the fecal-oral route. After an incubation period of 1-2 days, the onset of gastroenteritis is sudden. Symptoms can last from 4-5 days and range from diarrhea and vomiting, to fever, and occasional abdominal pain. Loss of fluids and electrolytes can lead to severe dehydration, hospitalization, and even death.

The first diagnostic tool used for the detection of rotaviruses in stool specimen was electron microscope, but nowadays there were rapid and economical methods for detecting rotavirus antigen in stool. Simple to perform enzyme-linked immunosorbent assays (ELISA) and latex agglutination kits have been developed.

Diagnosis by rotavirus isolation in cell culture system is very laborious and time consuming compared with previous mentioned methods.

Viro-Capture™ Rotavirus Detection Kit is a qualitative immunoassays kit for the detection and identification of rotaviruses in fecal specimen or virus infected cell culture supernatant.

Purpose

The **Viro-Capture™** Rotavirus Detection Kit is antigen capturing enzyme immunoassay intended for the detection of rotavirus antigens in human feces or supernatant obtained from rotavirus infected cell monolayer.

Reagent provided

All reagents provided are stored at 4°C. Refer to the expiration date on the label. Each kit contains sufficient reagents for 96 determinations.

1. COATED MICROPLATE

(Cat. No. VC-PR01) **96well**
One 96 well microplate in a frame (12 x 8 well breakapart microwell strips) pre-coated with mouse anti-rotavirus monoclonal antibody against group A rotavirus in a reusable foil bag.

2. SAMPLE DILUENT

(Cat. No. VC-P001) **100ml**
Tris buffered saline containing thimerosal agent and red dye.

3. WASHING BUFFER(25X conc.)

(Cat. No. VC-P002) **40ml**
Tris buffered saline containing thimerosal agent and detergent.

4. POSITIVE CONTROL

(Cat. No. VC-PR04) **2ml**
Inactivated rotavirus. Ready to use.

5. CONJUGATE

(Cat. No. VC-PR05) **11ml**
Polyclonal antibody against rotavirus conjugated with horseradish peroxidase in a buffered solution containing antimicrobial agent and red dye. Ready to use.

6. SUBSTRATE/CHROMOGEN

(Cat. No. VC-P003) **11ml**
Substrate buffer containing TMB. Ready to use.

7. STOP SOLUTION

(Cat. No. VC-P004) **6ml**
0.5N sulfuric acid. Ready to use.

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Preparation of stool sample

Prepare a 1 : 10 dilution of stool by adding 0.1gram to 1ml of sample dilution buffer. Mix well and centrifuge at 3000rpm, 4°C for 20min. Supernatant is used for the test. For diarrhea stools a lower dilution may be used. (i.e., 1 : 5 dilution)

Assay procedure

1. Add 2 drop (100ul) of positive control or samples and add 2 drops of enzyme conjugate.
2. Incubate at 25°C for 60min.
3. Wash wells 5 times by using 1x washing buffer.
4. Add 2drops of substrate solution.
5. Incubate at 25°C for 15min.
6. Add 1 drop of stop solution and read absorbance at 450nm wavelength.

Interpretation of Results

Positive : Absorbance reading of 0.2 and above indicate the sample contains rotavirus antigen.

Negative : Absorbance reading less than 0.2 indicates the sample does not contain detectable levels of rotavirus antigen.

Detection limit

Virus Particles	Mean OD at 450nm
1.5 X 10 ⁷	2.57
3.5 X 10 ⁶	1.48
1.0 X 10 ⁶	0.89
4.5 X 10 ⁵ *	0.25
6.8 X 10 ⁴	0.11

* Detection limit