

BIOINCELL

221 Baker Rd, Houston Tx 77094, USA
Tel: (281) 579-6872, Fax: (281) 579-6876, e-mail: info@bioinCELL.com

Viro-Capture™ Adenovirus Detection Kit

Catalog No. VC-A001

Size : 1 x 96well

Introduction

Adenoviruses are non-enveloped icosahedral viruses containing double-stranded DNA. There are 49 immunologically distinct types (6 subgenera : A through F) that can cause human infections.

Adenoviruses most commonly cause respiratory illness; however, depending on the infection serotype, they may also cause various other illnesses such as gastroenteritis, conjunctivitis, cystitis, and rash illness.

Symptoms of respiratory illness caused by adenovirus infection range from the common cold syndrome to pneumonia, croup, and bronchitis.

Patients having compromised immune systems are especially susceptible to severe complications of adenovirus infection.

Acute respiratory disease (ARD), first recognized among military recruits during World War II, can be caused by adenovirus infections during conditions of crowding and stress.

Antigen detection, polymerase chain reaction assay, virus isolation, and serology can be used to identify adenovirus infections.

Viro-Capture™ Adenovirus Detection Kit is a qualitative immunoassay kit for the detection and the identification of adenoviruses in fecal specimen or adenovirus infected cell culture supernatant.

Purpose

The **Viro-Capture™** Adenovirus Detection Kit is antigen capturing enzyme immunoassay intended for the detection of adenovirus antigens in human feces or supernatant obtained from adenovirus 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-PA01) **96well**

One 96 well microplate in a frame (12 x 8 well breakapart microwell strips) pre-coated with mouse anti-adenovirus monoclonal antibody against adenovirus 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-PA04) **2ml**

Inactivated Adenovirus. Ready to use.

5. CONJUGATE

(Cat. No. VC-PA05) **11ml**

Polyclonal antibody against adenovirus conjugated with horseradish peroxidase in a buffered solution containing antimicrobial agent and blue 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 diluent. Mix well and centrifuge at 3,000rpm, 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 drops (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 indicates the sample contains adenovirus antigen.

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

Detection limit

Virus Particles	Mean OD at 450nm
1.7 X 10 ⁷	2.40
4.3 X 10 ⁶	1.54
2.5 X 10 ⁶	0.79
3.5 X 10 ⁵ *	0.21
7.2 X 10 ⁴	0.15

* Detection limit