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Viral DNA Extraction Solution

Composition

Viral DNA Extraction Solution	100 Preps
Cat. No.	4004100
Viral DNA Extraction Solution	5 ml
Instructions	1

Storage

Reagents if stored at room temperature (0~30℃), can be used in 2 years without significant changes in performance; if stored at 2~8℃, can extend the validity of the product to more than 2 years.

Technical Support

R&D Department, Hangzhou Simgen Biotechnology Co., Ltd. technical@simgen.cn , Tel: 400-0099-857.

Introduction

This product is suitable for the extraction of viral DNA from 50 µl of fresh or frozen samples of body fluids including plasma, serum, urine, CSF, and cell culture supernatants. The samples are lysed in the Viral DNA Extraction Solution and then boiled to precipitate the proteins and the inhibitors are adsorbed by the resin. Viral DNA lysed in the supernatant can be obtained by high-speed centrifuge, and up to 5×10^2 copies/ml of viral sample can be detected.

Equipment and Reagents to Be Supplied by User

1. Dry bath, induction cooker, or water bath
2. 1.5 ml microcentrifuge tubes (Axygen 1.5 ml microcentrifuge tubes are recommended, otherwise the caps may burst open when incubated at the water bath)
3. Pipette and tips (to avoid contamination between samples, use DNase-free & RNase-free pipette tips with filter cartridges)
4. Disposable gloves and protective gear and tissues
5. Microcentrifuge(s) (with rotor for 1.5 ml and 2 ml microcentrifuge tubes)
6. Vortexer

Preparation before use

1) Set the water bath temperature to 100°C.

2) Cut off a portion of the head of the 200 µl pipette tip to facilitate aspiration of the resin in the Viral DNA Extraction Solution.

3) Pre-treatment of specimens according to their different sources.

Protocol

A. Serum, urine specimens, cerebrospinal fluid, herpes fluid, pharyngeal swab wash fluid, mouthwash fluid, cell culture supernatants

A1. Vortex the Viral DNA Extraction Solution to fully suspend the resin and add 50 µl of Viral DNA Extraction Solution to a 1.5 ml microcentrifuge tube using a 200 µl tip with the head cut off.

* The resin in the Viral DNA Extraction Solution tends to precipitate, so if more than one specimen is extracted, it should be frequently pipetting several times to suspend the resin for easy transfer.

A2. Transfer 50 µl of the sample into a 1.5 ml microcentrifuge tube, close the lid, and mix well by vortex.

B Genital tract swab wash fluid

B1. Transfer the genital tract swab to a 1.5 ml microcentrifuge tube and centrifuge at 12,000 rpm for 5 min. Discard the supernatant and retain the precipitate and a small amount of supernatant to give a final volume of approximately 50 µl.

B2. Vortex the Viral DNA Extraction Solution to fully suspend the resin and add 50 µl of Viral DNA Extraction Solution to a 1.5 ml microcentrifuge tube using a 200 µl tip with the head cut off. Cap the tube and vortex again to mix well.

* The resin in the Viral DNA Extraction Solution tends to precipitate, so if more than one specimen is extracted, it should be frequently pipetting several times to suspend the resin for easy transfer.

3. Boil at 100°C or incubate at a 100 °C water bath for 10 min.

4. Centrifuge at 13,000 rpm for 10 min.

5. Transfer the supernatant for PCR amplification.

* If the sample lysate is not used on the same day, store the supernatant at -20°C.
* The volume of supernatant used for template amplification should not exceed 1/10 of the final reaction volume (e.g., no more than 5 µl of supernatant should be used in a 50 µl PCR system).
* If a product with higher detection sensitivity is required; or if the percentage of template in the final reaction volume is to be increased, use the Simgen Viral Nucleic Acid Purification Kit (Cat. No. 4002050, which provides a 10- to 50-fold increase in detection sensitivity).