ToxinCleanic Endotoxin Removal Kit

[Cat. No.] K-7800

Introduction

Lipopolysaccharide (LPS) is well known as endotoxin, which is found in the outer membrane of the cell wall in gram-negative bacteria. LPS causes inflammatory response, which can directly regulate the immune system. ToxinCleanic Endotoxin Removal Kit consists of Endotoxin removal resin and 10X Regeneration buffer. The resin is conjugated with polymyxin B sulfate which is a family of antibiotics against gram-negative bacteria, which can remove the LPS in protein samples up to 90%. This resin can be packed in columns and remove the LPS from protein samples by either gravity-flow or centrifugation. This kit can easily remove a maximum of 2,000,000 EU endotoxins (1 EU = 0.1 ng) per 1 ml of resin from protein samples.

Features & Benefits

- Convenient: Easily removes endotoxins from protein samples with resin.
- Stability: Can be reused up to five times.

Components

Components	Amount
HotStart DNA polymerase	10 ml
10X Reaction buffer	10 ml

*** Note:** For research use only. Not for use in diagnostic or therapeutic procedures.

Specifications

Endotoxin removal resin	
Composition	Agarose resin
Binding capacity	> 2,000,000 EU/ml of resin

Buffer Composition

10X Regeneration buffer	10% Sodium deoxycholate in endotoxin free water

*** Note:** Storage of 10X Regeneration buffer at lower temperatures may cause precipitation. If precipitated, heat for 10-30 min at 40-60°C and vortex to redissolve.

Storage Buffer

Endotoxin removal resin is supplied as 50% slurry in 20% ethanol.

Storage

Store at 2-8°C.

Precautions

- Regenerate the resin before the first use and after each subsequent use.
- Do not freeze and vortex the Endotoxin removal resin vigorously.
- Use only endotoxin free materials (e.g. water, plastic wares, tips).
- Degas the resin and buffer before applying the column to prevent air bubbles from clogging the column.
- An exact protocol may need to be optimized by the user.

Online Resources

Korean English

Visit our **product page** for additional information and protocols.

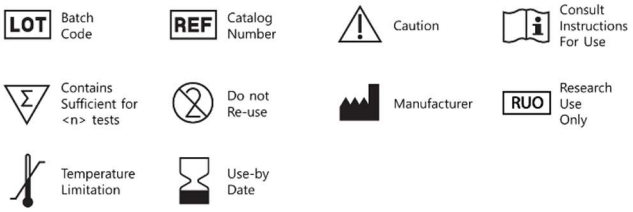
Ordering Information

Description	Cat. No.
ToxinCleanic Endotoxin Removal Kit	K-7800

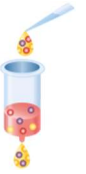
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Explanation of Symbols



Experimental Procedures

Steps		Procedure Details
Gravity-flow		
1	 **Packing a column**	1. Resuspend Endotoxin removal resin by gently vortexing. 2. Transfer 1 ml of resin to a 2 ml open column and allow the resin to settle. 3. Open the column and allow storage buffer to flow through. 4. Wash the resin by adding 2 ml of endotoxin free water, allow water to flow through. 5. Repeat step 4 two times.
2	 **Equilibrating resin**	6. Dilute the concentrated 10X Regeneration buffer 10-fold with endotoxin free water. 7. Equilibrate the resin by adding 2 ml of 1X Regeneration buffer. 8. Open the column and allow buffer to flow through. 9. Wash the resin by adding 2 ml of endotoxin free water, allow water to flow through. 10. Repeat step 8 two times.
3	 **Endotoxin removal**	11. Load the sample onto the pre-packed column and allow it to interact with the resin. 12. Collect the flow through in an endotoxin free tube. * **Note:** If necessary, repeat the endotoxin removal procedure by reloading the sample onto the colomn. 13. Analyze the endotoxin level with the endotoxin assay kit.
4	 **Resin storage**	14. Regenerate the resin as described in steps 4-10. 15. Store the column in 20% ethanol at 2-8°C. * **Note:** Keep the ends of the column tightly capped. This minimizes evaporation of solent and keeps the resin hydrated.
Centrifugation		
1	 **Resin transfer**	1. Resuspend Endotoxin removal resin by gently vortexing. 2. Transfer 500 µl of resin to a 1.5 ml tube. 3. Centrifuge for 1 min at 500 x *g* to remove the storage buffer. 4. Wash the resin by adding 1 ml of endotoxin free water. 5. Centrifuge for 1 min at 500 x *g* and remove the supernatant with a pipette. 6. Repeat step 4 and 5 two times.
2	 **Equilibrating resin**	7. Equilibrate the resin by adding 1 ml of 1X Regeneration buffer. 8. Centrifuge for 1 min at 500 x *g* to remove the buffer. 9. Wash the resin by adding 1 ml of endotoxin free water. 10. Centrifuge for 1 min at 500 x *g* and remove the supernatant with a pipette. 11. Repeat step 9 and 10 two times.
3	 **Endotoxin removal**	12. Load the sample onto the tube and allow it to interact with the resin. 13. Centrifuge for 1 min at 500 x *g* and collect the supernatant in an endotoxin free tube. * **Note:** If necessary, repeat the endotoxin removal procedure by reloading the sample onto the colomn. 14. Analyze the endotoxin level with the endotoxin assay kit.
4	 **Resin storage**	15. Regenerate the resin as described in steps 4-11. 16. Store the tube in 20% ethanol at 2-8°C. * **Note:** Keep the tube tightly capped for storage. This minimizes evaporation of solvent and keeps the resin hydrated.

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