

Mycoplasma Remover Reagent

Introduction

Mycoplasmas are the smallest prokaryotic microorganism, only 0.1-0.3 μm in size. Due to their small size, mycoplasmas can penetrate rated filters (0.22~0.45 μm). Mycoplasma contamination remains a major problem in cell culture. Mycoplasmas can alter the DNA, RNA, and protein synthesis of culture cells, but they may not noticeably affect cell growth rates in many cases. Therefore, it is difficult to discover mycoplasma contamination with the naked eye. And it is a must to detect mycoplasma contamination routinely for laboratories that use cell culture frequently.

Mycoplasma Remover Reagent is a kind of natural antibiotic, which can effectively against various mycoplasmas species including *Mycoplasma orale*, *Mycoplasma arginine*, *Mycoplasma hyorhinis*, and *Acholeplasma laidlawii*. Mycoplasma Remover Reagent is very easy to use and has no toxicity to cell growth. Following treatment with Mycoplasma Remover Reagent for 2-3 weeks, mycoplasma contamination should be inhibited or eliminated.

Mycoplasma Remover Reagent is light yellow, soluble in water, and its solubility in water is approximately 15 mg/mL. The working concentration of this reagent for inhibiting mycoplasmas ranges from 0.01-0.5 $\mu\text{g/mL}$, and the working concentration for eliminating mycoplasmas ranges from 0.5-250 $\mu\text{g/mL}$. The most commonly used concentration ranges from 1-50 $\mu\text{g/mL}$. The working concentration of the reagent can be adjusted in different experiments.

Components and Storage

Components	C7202-20 mg	C7202-100 mg
Mycoplasma Remover Reagent	20 mg	100 mg
Store the reagent at -20°C, stable for 3 years; store the stock solution at -20°C, stable for 6 months.		

Protocol

- Stock solution preparation:** Dissolve mycoplasma Remover Reagent in sterile ddH₂O to make a stock solution (10 mg/mL) and filter the stock solution through a 0.22 μm membrane. After the stock solution is prepared, it is recommended to aliquot the stock solution into small volumes to avoid repeated freeze-thaw cycles. The stock solution usually should be stored at -20°C. If not used for a long time, it can be stored at -80°C.

- 2. Mycoplasma prevention or inhibition:** Remove the culture medium, and add new medium containing the stock solution to culture the cells. The final concentration of Mycoplasma Remover Reagent in medium ranges from 0.01-0.5 µg/mL, the recommended concentrations commonly used are 0.2 µg/mL or 0.5 µg/mL.

***Note:** If medium or trypsin is contaminated by mycoplasma, Mycoplasma Remover Reagent also can be added to the medium to prevent contamination of cell culture exposed to these products.

- 3. Mycoplasma elimination:** Remove the culture medium, and add new medium containing stock solution to culture the cells. The final concentration of Mycoplasma Remover Reagent in medium ranges from 0.5-250 µg/mL, the recommended concentrations commonly used are 25, 50, 100, or 250 µg/mL. Following treatment with Mycoplasma Remover Reagent for 2-3 weeks, the presence of mycoplasma in cells should be tested.
- 4. Mycoplasma detection:** Check for mycoplasma contamination with DNA fluorescent stains such as DAPI (Catalog Number: C3362) or Hoechst 33342 (Catalog Number: A3472). If mycoplasma contamination is reduced but still present, it is suggested to improve the working concentration of the Mycoplasma Remover Reagent. If it still does not work, it is recommended to consider using BM-Cyclin (Catalog Number: C7201).

***Note:** DAPI and Hoechst 33342 are not provided in this kit. If necessary, purchase separately with Catalog Number.

Note

1. This product is irritating. Please pay attention to the protection to avoid contact with skin or inhalation.
2. This product has been proven to be able to eliminate many types of mycoplasmas, but mycoplasmas may develop resistance to this reagent over time. If this product is not effective, it is recommended to consider using BM-Cyclin (Catalog Number: C7201).
3. For research use only. Not to be used in clinical diagnostic or clinical trials.
4. For your safety and health, please wear lab coats and gloves during the experiment.

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