

## MycoPro

(Mycoplasma Elimination Agent)

Catalogue Number: C0007

Storage: -20°C

Size: 1 mL (25 mg/mL)

### Description:

Mycoplasma is a common and serious contaminant of cell cultures. It has been shown that more than 70% of cell cultures in the laboratory are infected with mycoplasma. In continuous cell cultures, contaminating mycoplasma may grow slowly without killing the cells but affecting various parameters including altered cellular proliferation and viability, morphological changes, cell transformation, mimicking virus infection, and irresponsiveness to drug treatment, etc., and ultimately leading to unreliable results.

Naturally, the ideal solution is to discard the contaminated cultures. However, if the cells that are stored in liquid nitrogen are also contaminated, the only option is to eliminate the mycoplasma, particularly if the cells are unique, which require extensive work to re-develop.

A number of effective methods for the elimination of mycoplasma contamination in cell cultures have been developed, the preferred method in terms of simplicity is treatment with antibiotics, which minimize the damages from other treatments. However, common antibiotics used in cell cultures such as penicillin, which attacks bacterial cell walls, are ineffective in this instance, since mycoplasma lacks a cell wall. Several antibiotics including Neomycin, Tetracycline and Gentamicin have been proven to be effective to eliminate mycoplasma. However, the efficacy of these antibiotics is restricted to specific mycoplasma species and often suppress mycoplasma proliferation rather than disinfect the cells. For this reason, once treatment is concluded, contamination will recur.

**MycoPro** is a broad spectrum antibiotic mix combining macrolide and quinolone, which is highly effective at killing and removing mycoplasma from cell cultures. Macrolides block protein synthesis by interfering with ribosome translation, whereas quinolones inhibit replication of mycoplasma DNA gyrase.

**MycoPro** shows strong anti-mycoplasma activity against many types of mycoplasma including *M. fermentans*, *M. hyorhinis*, *M. orale*, *M. arginini*, *A. laidlawii* and *M. hominis*. It is commonly used in cell culture, where it requires incubation

for two weeks after adding to cell cultures contaminated by mycoplasma.

### Features:

- Strong anti-mycoplasma activity against nearly all types of mycoplasma commonly found in cell culture.
- Highly effective at removing mycoplasma from infected cells at a low concentration (5 µg/ml)
- Prevent initial mycoplasma infection of cells culture.
- Prevent re-contamination of the culture with the original mycoplasma.
- Non toxic — will not interfere with the viability or function of cells at concentration up to 50 µg/ml.
- Easy to use — incubate cells for 2 weeks after addition of **MycoPro** to mycoplasma-contaminated cell cultures.

### Working Concentration:

Concentrations differ for various cell lines and mycoplasma species. For heavy contamination, 1:1000 dilution (25 µg/ml) is suggested although 1:5000 dilution will work for most contaminated cell cultures.

Two weeks treatment with **MycoPro** has been found to be sufficient to completely eliminate all mycoplasmas commonly found in cell cultures.

### Protocol:

1. Split an actively dividing culture of cells into medium containing 5-25 µg/ml of **MycoPro**.
2. Replace with fresh **MycoPro** containing medium every 2-3 days for 2 weeks. Split cells as needed and keep the cell confluency under 90%.
3. For maintenance of a mycoplasma-free culture, continue the use of **MycoPro** at a concentration of 5 µg/ml.

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