Plasmocure™

Elimination of Mycoplasma contamination in cell cultures

Catalog # ant-pc

For research use only

Version # 06K01-MT

PRODUCT INFORMATION

Content:

- 1 ml Plasmocure™ (100 mg/ml)

Shipping and Storage:

- Plasmocure™ is provided as a sterile, colorless, cell-culture tested solution.
- Plasmocure™ is shipped at room temperature. Upon receipt, store at 4°C for short term storage or at -20°C for long term storage.
- Plasmocure™ is stable 1 month at 37°C, 6 months at 4°C and 2 years at -20°C when properly stored.

Quality Control:

Activity of Plasmocure™ is rigorously controlled by physicochemical and microbiological assays.

GENERAL PRODUCT USE

Plasmocure™ is a highly effective antibiotic solution for the treatment of mycoplasma contaminated cell cultures. This solution is active against various *Mycoplasma* species that infect mammalian cell cultures including *M. hyorhinis*, *M. orale*, *M. arginini*, *M. fermentans*, *M. hominis* and *Acholeplasma laidlawii* that represent 90-95% of the contaminating strains.

Plasmocure™ is recommended for the elimination of mycoplasmas that appear to be resistant to Plasmocin™ (cat. code #ant-mpt). Plasmocin™ is a wide spectrum and potent antimycoplasma agent but in rare cases mycoplasmas resistant to Plasmocin™ treatment have been encountered. Plasmocure™ can eliminate Plasmocin™-resistant mycoplasmas because its mechanism of action is different from Plasmocin™.

Plasmocure™ is provided as a ready-to-use solution (100 mg/ml). Simply add to mycoplasma contaminated cell cultures at the recommended concentration (50 µg/ml) for 2 weeks.

Note: Plasmocure™ is intended only for the elimination of mycoplasmas in cell cultures. Do not use in humans.

BACKGROUND

Mycoplasma contamination remains a significant problem to the culture of mammalian cells. Recent reports estimate Mycoplasma contamination in up to 63% of all cell cultures. Mycoplasma cannot be detected by visual inspection and may not noticeably affect cell culture growth rates. However, Mycoplasma infection has been shown to alter DNA, RNA and protein synthesis, introduce chromosomal aberrations and cause alterations or modifications of host cell plasma membrane antigens.

DESCRIPTION / PROPERTIES

Plasmocure™ contains two bactericidal components belonging to different antibiotic families. They both act by inhibiting the protein synthesis but use distinct mechanisms. The first antibiotic binds to the 50S subunit of the ribosome and blocks the peptidyltransferase activity. The second antibiotic binds to the isoleucyl-tRNA synthetase and halts the incorporation of isoleucine into bacterial proteins. These two specific and separate targets are found only in mycoplasmas and Gram positive bacteria, and are completely absent in eukaryotic cells.

The cytotoxicity of Plasmocure is low, however a slowdown of cell growth may be observed at high concentrations due to the inhibition of mitochondria respiration. At the end of the treatment, when Plasmocure is removed from the culture medium, the cells return rapidly to their normal growth rate.

METHOD

Plasmocure™ can be added directly to the bottle of culture medium (250 µl of Plasmocure™ for a 500 ml bottle) or to the flask containing the cells. In this case we recommend to prepare a 1/10 dilution of Plasmocure™ by adding sterile water. The dilution can be stored at 4°C for 3 months.

Working concentration of Plasmocure™: 30 to 100 µg/ml.

Decontamination period: 2 to 3 weeks

1- Add Plasmocure™ to actively dividing cell cultures at a concentration of 50 µg/ml (25 µl of 1/10 diluted Plasmocure™ (10 mg/ml) in a 25 cm^2 flask containing 5 ml of culture medium).

Note: For better results, inoculate a 25 cm^2 flask with a 1/5 or 1/10 dilution of the contaminated cell cultures (2-10x10^5 cells in 5 ml).

2- Remove and replace with fresh culture medium containing Plasmocure™ (50 µg/ml) every 3-4 days for 2 weeks.

Note: For better results, pass the cell cultures when they reach a confluency of 80%.

3- Confirm the elimination of mycoplasmas by using a Mycoplasma detection kit such as PlasmoTest™, a cell-based colorimetric assay (cat. code #rep-pt).

Note: If Mycoplasma elimination is not completed after a two week treatment, you may continue the treatment for an additional week and/or increase the concentration to 100 µg/ml.

4- At the end of the treatment, maintain the cell cultures in Normocin™ (cat. code #ant-nr) and Pen/Strep or Primocin™ (cat. code #ant-pm) to prevent any further contamination.

TECHNICAL SUPPORT
Toll free (US): 888-457-5873
Outside US: (+1) 858-457-5873
Europe: +33 562-71-69-39
E-mail: info@invivogen.com
Website: www.invivogen.com

InvivoGen
3950 Sorrento Valley Blvd. Suite 100
San Diego, CA 92121 - USA