

Mycoplasma Removal Reagent (MRA)

Packing specification

Product number: IN0003

Specifications: 1mL (1000×); 5mL (1000×)

Storage conditions

Store at 4°C in the dark for 2 years, avoid repeated freezing and thawing

1. Operating Instructions

1. Add MRA to the cell culture medium contaminated by mycoplasma at a final concentration of 1X, and incubate for one week. (For example, in a 25 cm² culture flask, add 10uL of MRA to 10mL of medium)
2. Change the medium with the medium containing the same concentration of MRA.
3. Use cell culture medium without MRA to change the medium several times to confirm that mycoplasma contamination no longer occurs.
4. A mycoplasma detection kit can be used to detect contamination.
5. If you are worried about the presence of Mycoplasma in serum or trypsin, add 1X MRA to the culture medium to prevent Mycoplasma contamination.

2. Matters needing attention

This product is only used for research and development, only as a mycoplasma scavenger for cell culture media.

Pay attention to wearing gloves and masks when using this product, and comply with laboratory regulations.

When using the recommended concentration, it has low toxicity to cells. However, for any specific function of cells, it is recommended to retain the ideal cell characteristics for confirmation after processing. To

3. Sample data

Please note that the degree of infection, cell type and mycoplasma strain may affect the specific results. Each researcher should use the sample data as a guide to determine the effective MRA concentration requirements to meet their specific cell line and mycoplasma strain.

1. Mycoplasma removal effect-natural infection

	MRA concentration(ug/ml)	Continuous training time (days)			
		0	7	14	21
Human-derived cell A (human melanoma)	0.39	+	-	-	-
	0.2	+	-	-	-
	0.1	+	-	+	+
	0	+	+	+	+
Human-derived cell B (human lung cancer)	0.78	+	-	-	-
	0.39	+	-	-	-

	0.2	+	-	-	-
	0.1	+	+	+	+
	0	+	+	+	+

+ Mycoplasma positive; - Mycoplasma negative; MRA Continuous processing time: 7day

2. Comparison of functions of MRA and other drugs on the market

	MRA		Tiamulin		Minocycline	
	MIC*	MMC**	MIC	MMC	MIC	MMC
M. orale CH-19299	0.05	0.1	0.0031	3.13	0.05	25
M. arginini G-230	0.1	0.2	0.0063	12.5	0.2	>100
M. hyorhinis BST-7	0.05	0.1	0.0031	0.39	0.0031	0.39
A. laidlawii PG-8	0.0125	0.025	0.05	>100	0.05	>100
MMC/MIC	2		128 -----> 2048		512 -----> 2048	

M stands for Mycoplasma; A Representative plasma;

MIC stands for minimum inhibitory concentration; MMC stands for minimum Mycoplasma concentration

3. The minimum inhibitory concentration of MRA on other mycoplasma (ug/ml)

Species	MIC
Mycoplasma fermentans PG-18	0.0125
Mycoplasma salivarium PG-20	0.1
Mycoplasma hominis PG-21	0.1
Mycoplasma buccale CH-20247	0.025

4. Product description:

Mycoplasma, also known as mycoplasma, belongs to the class of Lapis. It has no cell wall, nor can it synthesize cell wall precursors. It has a three-layer structure of unit membrane, which cannot maintain a fixed form and exhibits polymorphism. It exists widely in nature, with more than 80 Species, the most common Mycoplasma that contaminate cells include Mycoplasma fermentum, Mycoplasma hyorhinis, Mycoplasma oral cavity, Mycoplasma arginine, Mycoplasma pear, Mycoplasma salivarius, and Mycoplasma hominis. Mycoplasma usually attaches to the surface of cells and affects the physiology, genetics and other normal functions of their host cells. Using these contaminated seemingly normal cells for experiments or production will seriously affect the results.

Mycoplasma scavenger is an effective method to solve the serious problem of mycoplasma contamination in cell culture. This reagent is an antibiotic derivative, which removes mycoplasma infection by inhibiting mycoplasma DNA gyrase helicase. In the recommended concentration, it can effectively remove a variety of mycoplasma and prevent the recurrence of mycoplasma pollution. It has a strong ability to inhibit the activity of mycoplasma and can completely remove mycoplasma from contaminated cultured cells within a week.

- 1). Specific and strong ability to inhibit the activity of mycoplasma, completely remove mycoplasma from contaminated culture: remove mycoplasma pollution by inhibiting DNA gyrase, which is an indispensable enzyme in the process of microbial DNA replication.
- 2). Wide range of activity: the activity can be maintained for up to 7 days in cell culture, and has an effect on a variety of mycoplasma strains.
- 3). Low concentration, low cytotoxicity: using at the recommended concentration, cytotoxicity is minimal, so it can also be used as a reagent to prevent mycoplasma contamination. Experiments show that compared with similar products of other brands, it has no lethal effect on normally cultured cells.
- 4). Prevent the recurrence of mycoplasma contamination: Once used, the cultured cells will no longer be contaminated by the same mycoplasma, thereby preventing the recurrence of contamination.
- 5). Easy to use: It is very convenient to use, it is ready to use, just add it to the cultured cells contaminated by mycoplasma and incubate for one week.

It can only be used for scientific research. It is forbidden to use it for human, animal or other purposes.