

Mycoplasma Detection and Elimination

Mycoplasma contamination remains a major problem in cell culture, affecting the validity of experimental results as well as the quality and safety of cell-based biopharmaceuticals. Because of their small size ($\leq 0.8 \mu\text{m}$) and lack of a rigid cell wall, mycoplasmas are undetectable by visual inspection, pass through standard filtration and are resistant to a great number of antibiotics¹.

Mycoplasmas compete with host cells for nutrients and biochemical precursors and thus can alter many cell functions, such as cell metabolism and cell growth, ultimately leading to cell death. Upon adhesion or fusion with the host cell membrane, they can cause further damage to the cell including interference with signaling cascades and cytokine production². Such detrimental effects can strongly impact scientific results and invalidate the findings of a study, especially when the study involves immune cells which express Toll-like receptor 2 (TLR2), a pattern recognition receptor that recognizes mycoplasma lipoproteins³.

Thus, many reasons support the need to establish routine detection of mycoplasma contamination in cell cultures and the use of specific antibiotics to save valuable cell lines. InvivoGen offers highly referenced solutions for the protection of your cell lines.

1. Drexler H.G and Uphoff C.C, 2002. Mycoplasma contamination of cell cultures: incidence, sources, effects, detection, elimination, prevention. *Cytotechnology*. 39:75. 2. Rottem S. 2003. Interaction of Mycoplasmas with host cells. *Physiol Rev*. 83:417. 3. Zakharova E. et al., 2010. Mycoplasma suppression of THP-1 Cell TLR responses is corrected with antibiotics. *PLoS One*. 5(3):e9900.

PlasmoTest™

Detection of Mycoplasma Contamination in Cell Cultures

- **Reliable:** No false positive
- **Rapid:** Hands-on time < 1 hour. Results after overnight incubation
- **Simple:** Colorimetric detection in cell culture supernatants

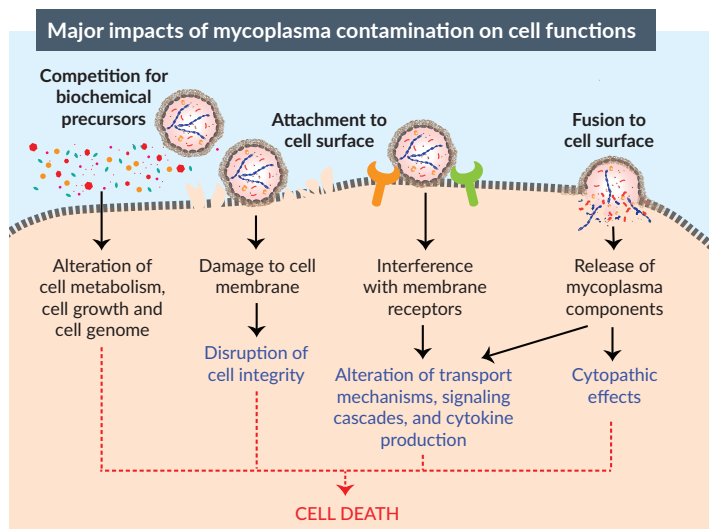
PlasmoTest™ is a cell-based mycoplasma detection assay that relies on the recognition of mycoplasmas by TLR2. It utilizes HEK-Blue™-2 sensor cells which produce the SEAP reporter protein upon TLR2 triggering. Addition of test samples to these cells provides colorimetric results with sensitivity similar to luminescence-based biochemical assays. PlasmoTest™ is provided as a kit containing the sensor cells, SEAP detection culture medium, and positive and negative controls.

Plasmocin™ & Plasmocure™

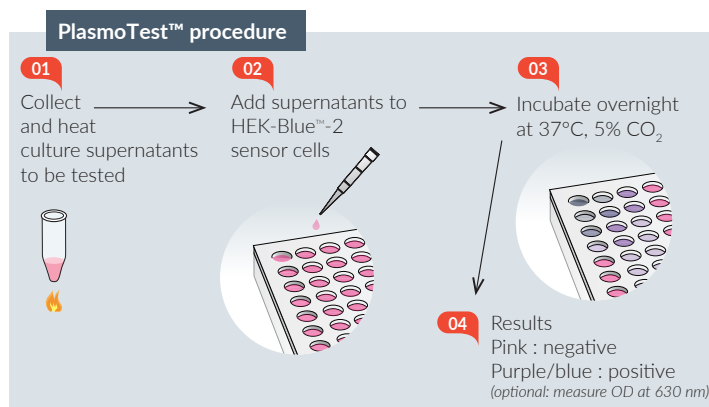
Elimination of Mycoplasma Contamination in Cell Cultures

- **Potent:** Eradicate all mycoplasmas in 2 weeks
- **Safe:** No cell alteration
- **Easy to use:** Simply add to cell culture medium

Plasmocin™ is a widely used mycoplasma removal agent and is highly effective against most mycoplasma strains. Plasmocure™ is a second-line anti-mycoplasma reagent that potently eradicates Plasmocin™-resistant mycoplasmas. With Plasmocin™ and Plasmocure™, elimination of mycoplasma contamination in cell cultures is guaranteed.



- ### TOP 5 REASONS TO TEST
1. 20 to 35% worldwide contamination, including cell banks
 2. Serious impact on data reliability and reproducibility
 3. Loss of cell lines
 4. Financial impact
 5. Mycoplasma testing required by most journals



PRODUCT	QUANTITY	CAT. CODE
PlasmoTest™	1 kit (250 tests)	rep-pt1
PlasmoTest™ controls	200 tests	pt-ctr2
PlasmoTest™ refills	500 tests	rep-ptrk
Plasmocin™	25 mg (1 ml)	ant-mpt-1
Plasmocure™	100 mg (1 ml)	ant-pc

www.invivogen.com/mycoplasma