

Mycoplasma Total Solution

Mycoplasma Detection

Mycoplasma Elimination

Mycoplasma Prevention

Cell Freezing Medium (Mycoplasma Free)



Mycoplasma Detection

CellSafe's Mycoplasma Detection Kits **Line Up**

| PCR Kit Features | <i>Conventional PCR</i> | | <i>Realtime PCR</i> | |
|--------------------------|----------------------------------|--|-----------------------------------|--|
| | <i>BioMycoX</i> | <i>HiSense</i> | <i>BioMycoX</i> | <i>MycoQsearch</i> |
| Application | For general mycoplasma detection | For accurate mycoplasma detection | For accurate mycoplasma detection | For accurate mycoplasma detection |
| Method | Conventional PCR | Conventional PCR | qPCR – probe type | qPCR – probe type |
| Detection Limit | 100fg~10fg/reaction | 10fg~1fg/reaction | 100fg~1fg/reaction | 10fg~1fg/reaction |
| PCR reaction time | 1.5hr | 1.7hr | 1.2hr | 1.5hr |
| Validation | | KFDA guideline EP 2.6.7 | | KFDA guideline EP 2.6.7 |
| Interest Group | R&D | ATMP* manufacturer, Pharmaceutical Industry | R&D | ATMP* manufacturer, Pharmaceutical Industry |

* Advanced Therapies Medicinal Products

BioMycoX[®] Mycoplasma PCR Detection Kit

BioMycoX[®] Mycoplasma Detection kit utilizes the polymerase chain reaction (PCR), which is the method of choice for highest sensitivity in the detection of *Mycoplasma* contamination in cell cultures and other cell culture derived biologicals. The primer set is specific to the highly conserved the 16S rRNA coding region in the mycoplasma genome. Eukaryotic and bacterial DNA is not amplified by *BioMycoX[®]* Mycoplasma Detection kit.

Characteristics

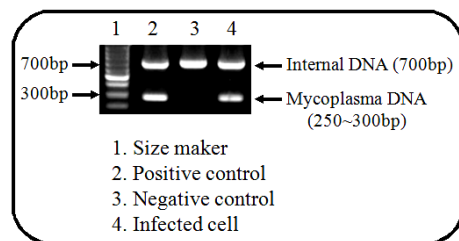
- Detecting all most species of mycoplasma.
- Providing validity of test results by internal control
- Ready-to-use, optimized PCR mastermix type

Easy & Fast

- Simply template are prepared by boiling the supernatant of cell culture.
- The results are within 2~3 hours .

Sensitivity

- 100~10 mycoplasma/reaction.



| Kit Components | BioMycoX [®] Mycoplasma PCR Detection Kit | | |
|---|---|----------|----------|
| | CS-D-25 | CS-D-050 | CS-D-100 |
| 2X PCR Premix with loading dye (Blue Cap) | 250μℓ | 500μℓ | 1ml |
| Primer MiX (Red Cap) | 50μℓ | 100μℓ | 200μℓ |
| Positive Control DNA (Yellow Cap) | 10μℓ | 25μℓ | 50μℓ |
| DNase Free Water (White Cap) | 150μℓ | 300μℓ | 600μℓ |

BioMycoX[®] Mycoplasma QPCR Detection Kit

BioMycoX[®] Mycoplasma QPCR Detection Kit is used to detect *Mycoplasma* infection of cell cultures by real-time quantitative PCR (qPCR) using Probe. The BioMycoX[®] Mycoplasma QPCR Detection Kit includes a Primer and Probe mixes. These mixes contain FAM labeled probe specific for mycoplasma species and Hex labeled probe for internal control DNA. The primer set is specific to the highly conserved the 16S rRNA coding region in the mycoplasma genome.

Characteristics

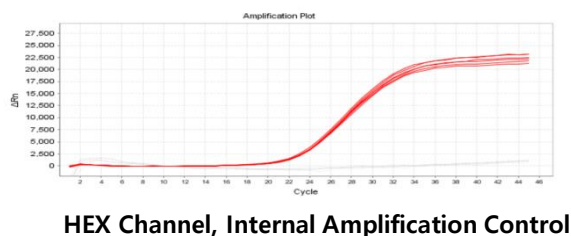
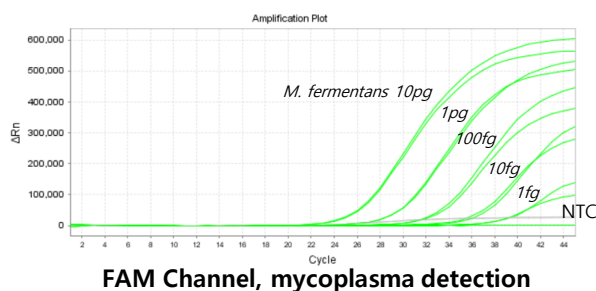
- Detecting all most species of mycoplasma.
- Providing validity of test results by internal control
- Ready-to-use, optimized PCR mastermix type

Easy & Fast

- Simply template are prepared by boiling the supernatant of cell culture.
- The results are within 2~3 hours .

Sensitivity

- 100~1 mycoplasma/reaction.



| Kit Components | MycoQSearch [™] Mycoplasma QPCR Detection Kit | | |
|--|--|---------|---------|
| | QDR-25 | QDR-050 | QDR-100 |
| 2X PCR Master Mix for Probe (Blue Cap) | 250μℓ | 500μℓ | 1ml |
| Primer and Probe Mix* (Amber Tube and Cap) | 50μℓ | 100μℓ | 200μℓ |
| Positive Control DNA (Yellow Cap) | 10μℓ | 25μℓ | 50μℓ |
| ROX (Reference Dye) (Amber Tube and Cap) | 150μℓ | 300μℓ | 600μℓ |
| DNase Free Water | 250μℓ | 1.25ml | 2.5ml |

HiSense® Mycoplasma qPCR Detection Kit

HiSense™ Mycoplasma PCR Detection Kit utilizes the PCR, which is established as the method of choice for highest sensitivity in the detection of mycoplasma, ureaplasma and acholeplasma contamination in cell culture and other cell culture derived biologicals. The primers are specific to the highly conserved 16S ribosomal RNA sequences in the mycoplasma genome. This allows for detection of all mycoplasma species including *Acholeplasma laidlawii*, *M. arginini*, *M. fermentans*, *M. gallisepticum*, *M. genitalium*, *M. hominis*, *M. hyorhinae*, *M. orale*, *M. pneumoniae*, *Spiroplasma citri* and *U. urealyticum*. All mycoplasma species including 8 genus and about 209 species can be detected simultaneously.

Characteristics

- Detecting all most species of mycoplasma.
- Providing validity of test results by internal control
- Ready-to-use, optimized PCR mastermix type

Specificity

- The kit does not detect other bacterial genera and cell-line.

Sensitivity

- The sensitivity of the PCR using this kit is less than 10fg of the target DNA per reaction. Sensitivity of the assay in real culture samples depends on the quality of the sample preparation.

Validation

- The kit was intensively validated according to the guidelines of the KFDA.

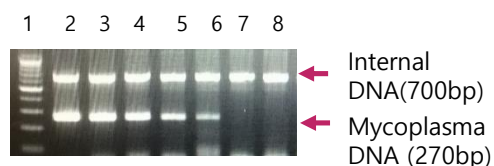


Fig. 1. Lane 1, 100bp DNA ladder; lane 2, 10pg *M. pneumoniae* DNA; lane 3, 1pg *M. pneumoniae* DNA; lane 4, 100fg *M. pneumoniae* DNA; lane 5, 10fg *M. pneumoniae* DNA; lane 6, 1fg *M. pneumoniae* DNA; lane 7, 8, PCR reagent control (negative control)



| Kit Components | BioMycoX® Mycoplasma PCR Detection Kit | | |
|---|---|----------|----------|
| | CS-D-25 | CS-D-050 | CS-D-100 |
| 2X PCR Premix with loading dye (Blue Cap) | 375µl | 750µl | 1.5ml |
| Primer MiX (Red Cap) | 50µl | 100µl | 200µl |
| Positive Control DNA (Yellow Cap) | 13µl | 25µl | 50µl |
| DNase Free Water (White Cap) | 300µl | 600µl | 1.2ml |

MycoQSearch™ Mycoplasma QPCR Detection Kit

The *MycoQSearch* Mycoplasma QPCR Detection Kit is used to detect *Mycoplasma* infection of cell cultures by real-time quantitative PCR (qPCR) using Probe. The *MycoQSearch* Mycoplasma QPCR Detection Kit includes a Primer and Probe mixes. These mixes contain FAM labeled probe specific for mycoplasma species and Hex labeled probe for internal control DNA. The primer set is specific to the highly conserved the 16S rRNA coding region in the mycoplasma genome. This allows for detection of all mycoplasma species including *Acholeplasma laidlawii*, *M. arginini*, *M. fermentans*, *M. gallisepticum*, *M. genitalium*, *M. hominis*, *M. hyorhinitis*, *M. orale*, *M. pneumoniae*, *Spiroplasma citri* and *U. urealyticum*. All mycoplasma species including 8 genus and about 209 species can be detected simultaneously.

Characteristics

- Detecting all most species of mycoplasma.
- Providing validity of test results by internal control
- Ready-to-use, optimized PCR mastermix type

Specificity

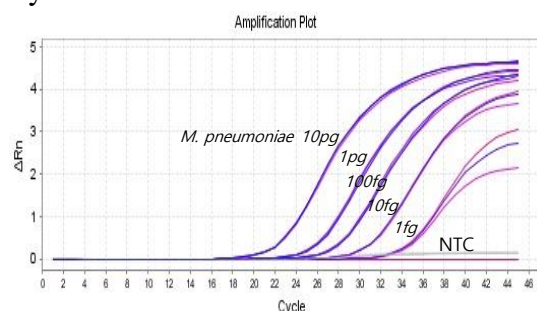
- The kit does not detect other bacterial genera and cell-line.

Sensitivity

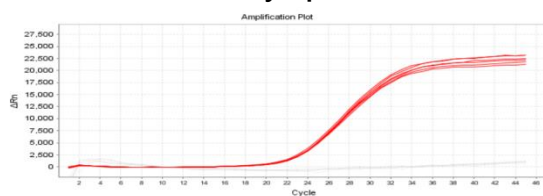
- The sensitivity of the PCR using this kit is less than 10fg of the target DNA per reaction.

Validation

- The kit was intensively validated according to the guidelines of the KFDA.



FAM Channel, mycoplasma detection



HEX Channel, Internal Amplification Control



| Kit Components | MycoQSearch™ Mycoplasma QPCR Detection Kit | | |
|--|--|--------|--------|
| | QD-Sample | QD-050 | QD-100 |
| 2X PCR Master Mix for Probe (Blue Cap) | 150μℓ | 750μℓ | 1.25ml |
| Primer and Probe Mix* (Amber Tube and Cap) | 20μℓ | 100μℓ | 200μℓ |
| Positive Control DNA(Yellow Cap) | 10μℓ | 25μℓ | 50μℓ |
| ROX (Reference Dye) (Amber Tube and Cap) | 10μℓ | 50μℓ | 100μℓ |
| DNase Free Water | 250μℓ | 1.25ml | 2.5ml |

Mycoplasma Elimination

BioMycoX Mycoplasma Elimination Kit

The *BioMycoX*[®] Mycoplasma Elimination kit has been developed to quickly and completely eliminate mycoplasma contamination from cell cultures. Current methods for the inactivation or elimination of mycoplasma in cell cultures are antibiotic-based. Antibiotic therapies in particular do not always result in a successful and permanent elimination of the contaminants.

The *BioMycoX*[®] Mycoplasma Elimination kit is a combination of biological agents that reliably and completely eliminate mycoplasma contamination. The *BioMycoX*[®] Mycoplasma Elimination Kit is suitable for the elimination of *Mollicutes* and related organisms (*Mycoplasma*, *Acholeplasma*, *Ureaplasma*, *Spiroplasma*, and *Entomoplasma*) in cell and virus cultures.

- **Highly effective**

- Permanent elimination

- **Applicable cell lines**

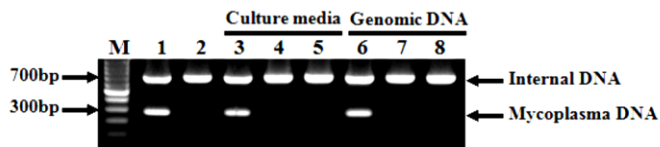
- The kit can be used for all type cell lines.

- **No cytotoxicity**

- Most of cell lines do not show any morphological changes during treatment.

- **Fast**

- Mycoplasma are permanently eliminated within 1.5 weeks.



M: 100bp DNA ladder

1: Positive control (mycoplasma control DNA)

2: Negative control (DW)

3, 6: Mycoplasma infected cell / before treatment

4, 7: Mycoplasma infected cell / 1 passage after treatment

5, 8: Mycoplasma infected cell / 10 passages after treatment



| Kit Components | Mycoplasma Elimination Kit | |
|------------------------|----------------------------|--|
| | CSE-01 | |
| Elimination Reagent I | 200ul | |
| Elimination Reagent II | 200ul | |

Mycoplasma Prevention

BioMycoX[®] Mycoplasma Prevention Spray

Mycoplasma contamination occurs in less than 1% of primary cells. However, the contamination rate in cells increases generally as cell passages continue. This is mainly because careless treatments of cell lines result in the increased occurrence of mycoplasma contamination. According to researches on mycoplasma contamination, about 15% of cell lines in labs in US and about 50% of them in Korea are estimated to be contaminated by mycoplasma, respectively.

Cross contamination is the main reason for mycoplasma contamination in labs dealing with cells as lab equipment, experiment tables, and researchers serve as medium of spreading mycoplasma. Regular sterilization of the equipment and the personal cleanliness of researchers are the only way to prevent mycoplasma contamination.

- **Convenient and Ready-to -use**

- The spray is a ready to use solution supplied in a spray bottle.

- **Fast**

- The spray effects mycoplasma immediately. Within seconds mycoplasma are completely elimination.

- **Non-corrosive and non-carcinogenic**

- The spray is an alcohol-based, non-corrosive and non-carcinogenic solution.

- **Broad spectrum of antimicrobial activity**

- The spray have not only a strong mycoplasmacidal activity but also bactericidal, fungicidal and virucidal effects.



| Product | Cat. No. |
|-----------------------------|-----------|
| Mycoplasma Prevention Spray | CSP-1000 |
| | CSP-5000 |
| | CSP-10000 |

CryoBanker™ – Cell Freezing Medium

CRYOBANKER™ is a serum-free cell cryopreservation medium with unique complete formulation for broad spectrum of mammalian cell cultures. The unique formulation allows for stable cryopreservation and high viability after freeze-thaw procedure, without potential risk of contamination by serum. Optimum for serum-free cultured cells and peptide/protein expressing cells cryopreservation.

Features

- 100% Serum free
- 100% Mycoplasma free
- High cell viability,
- No risk of contamination by serum derived pathogens
- Batch-to-batch stability.
- Complete formulation,
- No further preparation,
- Direct freezing at -80°C,
- No programmable freezer required



| Product | Cat. No. |
|------------|----------------|
| CryoBanker | CB-50 (50ml) |
| | CB-100 (100ml) |

ORDERING INFORMATION

| Product | Cat. No. |
|---|-----------|
| Mycoplasma Detection | |
| <i>BioMycoX</i> Mycoplasma PCR Detection Kit | CSD-25 |
| | CSD-50 |
| | CSD-100 |
| <i>BioMycoX</i> Mycoplasma qPCR Detection Kit | QDR-25 |
| | QDR-50 |
| | QDR-100 |
| <i>HiSense</i> Mycoplasma PCR Detection Kit | HD-25 |
| | HD-50 |
| | HD-100 |
| <i>MycQsearch</i> Mycoplasma qPCR Detection Kit | QD-50 |
| | QD-100 |
| Mycoplasma Elimination | |
| <i>BioMycoX</i> Mycoplasma Elimination Kit | CSE-01 |
| Mycoplasma Prevention | |
| <i>BioMycoX</i> mycoplasma prevention spray | CSP-1000 |
| | CSP-5000 |
| | CSP-10000 |
| <i>CryoBanker</i> (<i>Mycoplasma free</i>) | CB-50 |
| | CB-100 |



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