

Cell Biology - Culture

Cell Culture testing

Cell proliferation and viability assay : Uptiblu

Uptima offers a unique reagent for proliferation and viability assay, UptiBlue, that is commonly used to check cell culture health, and for agents screening (cell activity or toxicity studies with bioactive factors, drugs and any xenobiotic). It overcomes popular techniques, notably MTT and radioactivity, in many applications, while allowing new ones, i.e. attached cell lines!

It is based on a fluorescent probe highly sensitive to redox potential. Fluorescence is monitored at 530-560nm excitation wavelength and 590 nm emission wavelength. The method is highly reliable.

Features	Benefits
Works in both Fluorescent and Colorimetric detections Fluorescence is monitored at 530-560 nm excitation wavelength and 590 nm emission wavelength	Allows choice of detection method : either with a spectrophotometer or a spectrofluorometer
Performant for many applications !	Works on suspension or attached cell lines. Compatible with cell-supports that disaggregate (ceramic, HA). No interference from the presence of 10% fetal bovine serum, nor from phenol red in the growth medium.
Water soluble	No extraction required !
Non-toxic for cells	Less likely to interfere with normal metabolism. Allows continuous cell growth monitoring, kinetic studies, incubation time of days
Non-toxic to technician	Safe, disposable, less regulation
Easy-to-use	Time saving, easily adaptable to microplates & automation.fewer steps than MTT technique: no cell extraction or lysis required.No centrifugation required !. Stable (12 months at RT, 20 months at 2-8°C, or indefinitely at -70°C)



Description	Cat.#	Qty
Uptiblu Viable Cell Counting Assay	UP669412	25 ml
	UP669413	100 ml

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Including BioScience Innovations cat. number, are available from our web site :

www.interchim.com

Mycoplasma Detection

Mycoplasma Detection PCR Kit 16S rRNA Gene

Advantages :

- ◆ High sensitivity : detects 0.1-1.6 colony forming units
- ◆ Broad detection range : detects >95% mycoplasma
- ◆ High specificity
- ◆ Speedy and easy-to-use : obtain clear result in less than 1 day

This kit provides a simple, fast method to screen for mycoplasma positives with high reliability. It is based on a nested PCR assay to detect a specific fragment of mycoplasmas 16S rRNA gene.

Kit includes :

- ◆ 2X Optimal PCR Buffer, 1250 µl x 2 (containing chemicals, enhancer, stabilizer and dNTPs)
- ◆ 10X Positive contro, 100 µl
- ◆ 10X PCR Primer Set, 500 µl
- ◆ DNA M.W. Marker, (100 bp ladder) 100 µl
- ◆ ddH₂O (DNase free), 2.0 ml

Description	Cat.#	Qty
Mycoplasma Detection PCR Kit 16S rRNA Gene	T56760	50 tests

Endotoxin Removal

Many molecular biology laboratory applications require endotoxin-free preparations of plasmid DNA and high molecular weight genomic DNA. The MiraCLEAN® Endotoxin Removal Kit provides a convenient and improved method for the removal of bacterial endotoxins from nucleic acids for both in vivo and in vitro applications. Escherichia coli, a Gram-negative eubacteria, is the common host for plasmid production. The outer leaflet of the outer membrane contains lipopolysaccharides (LPS, or endotoxin), which can cause inflammatory reactions, fever and endotoxic shock in vivo. Endotoxin in plasmid preparations is also known to decrease transfection efficiencies in vitro.

MiraCLEAN® Endotoxin Removal Kit

- ◆ Efficient removal of endotoxin from nucleic acid preparations.
- ◆ Ideal for in vivo and in vitro applications.
- ◆ Improved yields via distinct visualization of extraction phases.
- ◆ Simple protocol.

The MiraCLEAN® Kit is based on a rapid phase extraction of endotoxin. The proprietary pink-colored EndoGO Extraction Reagent allows better visualization of the interface between phases, thereby greatly facilitating phase separation and increasing nucleic acid recovery. EndoGO Extraction Reagent and the MiraCLEAN® Buffer remove endotoxin contamination from DNA and thus, aid in the safety and efficiency of gene delivery research.

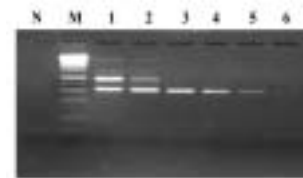
Description	Cat.#	Qty
MiraCLEAN® Endotoxin Removal Kit	T82460	10 mg DNA
	T82461	100 mg DNA

Technical tip

Mycoplasmas are frequently found as contaminants in cell cultures. Studies have shown the incidence of mycoplasma contamination ranges from 5% to 87% of cell culture examined.

Unlike bacteria and fungi, contamination of mycoplasma usually does not result in turbid growth in cultures or with macroscopic alteration of cells. However, mycoplasma contamination may cause adverse effects, such as changes in metabolism, growth, viability, DNA, RNA and protein synthesis, morphology and virus propagation etc. Thus, mycoplasma contamination in cell cultures may lead to unreliable experiments and develop unsafe biological products. Testing for mycoplasma is a necessary quality control to assure accurate research and reliable biotechnological products.

Several different approaches have been used to detect mycoplasmas in cell culture, including microbiological culture, DNA fluorescent staining, ELISA, immunofluorescence detection and electron microscopy. Although each of these tests has its own specific advantages, none offer the combined sensitivity, specificity and speed associated with the use of PCR to detect mycoplasma. They limitations have lead to detect specific fragments of mycoplasmas, and 16S rRNA gene was found the most interesting.



1. MPL-PCR primers with 1,000,000 copies of *M. fortuitum* DNA
 2. MPL-PCR primers with 100,000 copies of *M. fortuitum* DNA
 3. MPL-PCR primers with 10,000 copies of *M. fortuitum* DNA
 4. MPL-PCR primers with 1,000 copies of *M. fortuitum* DNA
 5. MPL-PCR primers with 100 copies of *M. fortuitum* DNA
 6. MPL-PCR primers without DNA (Negative Control)

