The integrity of your research depends on the integrity of your cell line. Take control. Confirm, protect, and maintain the integrity of your cell line throughout your research.

Prominent Journals have already taken action

• Many have already adopted cell line authentication policies for manuscript submission, including NATURE

“Work involving human cell lines must indicate where and when the cells were obtained, whether the cell lines have been tested and authenticated, how the cells were tested, and when.”

“End the scandal of false cell lines” Masters JR, 2012. NATURE 492:186.

From sample to results with ease, efficiency, and economy

• Convenient collection kit includes DNA collection card
• Process and return to DDC Medical
• Free return shipping
• Results within 5 business days from receipt of sample
• Results are confidential

Trust the experts at DDC Medical for your DNA testing needs

Independent third-party laboratory combined with cutting-edge technology, experience, and service to deliver results
• The world’s largest private DNA laboratory
• More than 18 years of experience in DNA testing
• More than a half million DNA tests performed in 2012
• Nationally and internationally recognized for excellence
• Ranked “perfect” in 18 past inspections, including those by the American Association of Blood Banks (AABB) and the College of American Pathologists (CAP)
• Accredited by the AABB, CLIA, ACLASS for ISO/IEC 17025:2005, CAP, and NYSDOH

DDC Medical is recognized by healthcare workers, legal professionals, and the media as the best resource for DNA testing

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How well do you know your cell line?

Despite the best efforts of researchers, a significant number of cell lines are contaminated or misidentified, and continue to be compromised.

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Despite the best efforts of researchers, a significant number of cell lines are contaminated or misidentified, and continue to be compromised.

Take control. Confirm, protect, and maintain the integrity of your cell line throughout your research.
Since cell lines are immortal and can live forever, they are critical to research and a major issue is cell line contamination leading to misidentification and drawing incorrect conclusions for specific cancers.  

The role of cell authentication in biomedical science has received considerable attention, especially within the past decade. This quality control attribute is now beginning to be given the emphasis it deserves by granting agencies and by scientific journals.  

“Since cell lines are immortal and can live forever, they are critical to research and a major issue is cell line contamination leading to misidentification and drawing incorrect conclusions for specific cancers.”   —Mayo Clinic, 2010

“Cell line authentication is simple to integrate into your research protocols. Perform cell line authentication when...”  

RECEIVING a cell line from an outside source, prior to or when preparing initial frozen stock  

• Especially if another investigator has handled the cell line

CREATING a new cell line, when preparing initial frozen stock  

• To rule out cross-contamination

SHARING equipment or if many cell lines are present in a single lab  

• To rule out cross-contamination

ESTABLISHING subsequently prepared frozen stocks  

• To provide a reference for future cultures

EXPANDING beyond 2 or 3 passages or when maintaining cell lines for long periods of time  

• To check for contaminants previously undetected during initial freezing

• To check for mutations due to long-term culturing

Conducting any individual research project (at the beginning, middle, and end)  

• Especially prior to publication

The quality control of your cell line is essential to solid research results

Cell line authentication is simple to integrate into your research protocols.

The need to be absolutely certain has never been greater.

The growing body of evidence is concerning

Despite the best efforts of researchers and laboratories,  

• As many as 36% of cell lines currently in use may be contaminated

• 18% are completely misidentified

• A recent review of scientific literature cited a total of 360 cross-contaminated and misidentified cell lines, most with no known authentic stocks

“One of the most serious issues facing the biomedical research community today is the authentication of human cell lines used in research and drug development as models of normal and cancer tissue.”  —ATCC, 2012

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Certification of Analysis

Cell Line Authentication Service

The most advanced Short Tandem Repeat (STR) DNA analysis available

• 17 highly polymorphic markers as genetic markers to establish identity and confirm authenticity

• The STR analysis, one of a few DNA profiling technologies now available, is being proposed for routine identification (authentication) of human cell lines, stem cells, and tissues.”  —NIH, 2010

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“Such applications that fail to employ [acceptable CLA] methods would not be considered of the highest quality.”  

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Research institutions are starting to care about this issue

• In just 3 years, new standards and mandates have been established around the world and are rapidly gaining momentum.

• In January 2012, the ATCC issued standards specifically identifying Short Tandem Repeat (STR) profiling as the preferred protocol

• The FDA has already incorporated cell line authentication (CLA) into its policies for clinical trials and manufacturing

• Many of the nation’s top research centers (such as Johns Hopkins, MD Anderson, and Mayo Clinic) have already embraced CLA to verify their programs and gain a competitive edge in getting published

• The NIH considers cell line misidentification and contamination to be a serious and ongoing problem

“Short applications that fail to employ [acceptable CLA] methods would not be considered of the highest quality.”  —NIH, 2007

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“Myeloplasma Detection Service

State-of-the-art analysis to rule out difficult-to-detect bacterial infections

• Screens for 19 species, including the 6 most common

• Proprietary technology detects 95% of all mycoplasma contaminants

• These contaminants are otherwise undetectable through visual inspection and other routine assessments of cell culture purity

• Detection sensitivity demonstrated at 3 to 5 genomes per microfluid

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The quality control of your cell line is essential to solid research results

Cell line authentication is simple to integrate into your research protocols.
The integrity of your research depends on the integrity of your cell line.
The role of cell authentication in biomedical science has never been greater.

Despite the best efforts of researchers and laboratories, contamination leading to misidentification and drawing incorrect conclusions for specific cancers has never been greater. The need to be absolutely certain about this issue is concerning. Research institutions are starting to care about this issue. In just 3 years, new standards and mandates have been established around the world and are rapidly gaining momentum.

In January 2012, the ATCC issued standards specifically identifying Short Tandem Repeat (STR) profiling as the preferred protocol. The FDA has already incorporated cell line authentication (CLA) into its policies for clinical trials and manufacturing. Many of the nation’s top research centers (such as Johns Hopkins, MD Anderson, and Mayo Clinic) have already embraced CLA to verify their programs and gain a competitive edge in getting published. The NIH considers cell line misidentification and contamination to be a serious and ongoing problem.

"One of the most serious issues facing the biomedical research community today is the authentication of human cell lines used in research and drug development as models of normal and cancer tissue." 2

\[
\text{2012, ATCC, 2012} \\
\text{36% in use may be contaminated} \\
\text{36\% of cell lines currently} \\
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"We encourage all reviewers to consider these issues carefully in order to protect and promote the validity of the science we support." 3

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The growing body of evidence is concerning

Despite the best efforts of researchers and scientific journals, a total of 36% of cell lines used in research and drug development are contaminated.1

As many as 36% of cell lines currently in use may be contaminated.2

A recent review of scientific literature cited a total of 360 cross-contaminated and misidentified cell lines, most with no known authentic stocks.3

"One of the most serious issues facing the biomedical research community today is the authentication of human cell lines used in research and drug development as models of normal and cancer tissue."4

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"Even applications that fail to employ the CLA methods would not be considered the highest quality."11

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To support your research efforts, Fisher Scientific and DDC Medical, the leading experts in DNA testing, are providing you with unique DNA testing services.

"We encourage all reviewers to consider these issues carefully in order to protect and promote the validity of the science we support."14

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• Short tandem repeat (STR) profiling, one of a few DNA profiling technologies now available, is being proposed for routine identification (authentication) of human cell lines, stem cells, and tissues.

The need for mycoplasma detection in biomedical research is well-established.21

At present, the only method available for mycoplasma detection in cell culture is visual inspection.22

The Fisher Scientific/ATCC Mycoplasma Detection Service is the most advanced mycoplasma detection method currently available.

The comprehensive capabilities and reporting deliver certainty you can count on

DNA extraction and complete Certificate of Analysis provided for every test

• Authenticating your cell line with a genetic signature

• Raw data also provided in electronic spreadsheet

• Results stored confidentially and securely

Electropherogram reports also available

• Visual representation of the data generated by STR analysis

• Shows the alleles detected and a plot of their distribution

• Provides additional documentation

Also available: Reference sample comparison to the ATCC database for identity confirmation

Perform cell line authentication when...

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DELETERIOUS INFORMATION


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