

Cell Authentication FAQs

How often should we authenticate our cell lines?

The emerging trend seems to be that cells are required to be authenticated within 6 months prior to the date of article submission. For good laboratory practice, it is advised to authenticate at the beginning and during a project, rather than only at the end. This ensures you truly know what you are working with.

What if I don't want to authenticate my cells?

Many journals still have no formal requirement for information on the authenticity of human cell lines used in original research. However reviewers often request scientists to supply a cell line authentication profile, even though this is not formally required by journals. LGC Standards expects this trend to continue and we believe it will become increasingly difficult to publish data generated using unauthenticated human cell lines.

What percentage of cell lines are misidentified or contaminated?

There have been a number of publications over recent years reporting approximately 15-20% of human cell lines in culture are either contaminated or misidentified²⁻³. Our experience aligns with these published figures.

References

1. Masters et al., (2001) Short tandem repeat profiling provides an international reference standard for human cell lines. *PNAS* 98(14): 8012-8017
2. MacLeod et al., (1999) Widespread intra-species cross-contamination of human tumor cell lines arising at source. *Int J Cancer* 83(4) 555-563 (Cell line: ECV304)
3. Drexler HG et al. (2003) False leukemia-lymphoma cell lines: an update on over 500 cell lines. *Leukemia*, 17(2):416-426.

For more information contact your local LGC Standards office.

France

LGC Standards S.a.r.l.
Tel: +33 (0)3 88 04 82 82
Fax: +33 (0)3 88 04 82 90
fr@lgcstandards.com

Germany

LGC Standards S.a.r.l.
Tel: +49 (0)281 9887 230
Fax: +49 (0)281 9887 239
de@lgcstandards.com

Italy

LGC Standards S.r.l.
Tel: +39 02 2412 6830
Fax: +39 02 2412 6830
it@lgcstandards.com

Poland

LGC Standards Sp.z.o.o.
Tel: +48 (22) 751 31 40
Fax: +48 (22) 751 58 45
pl@lgcstandards.com

Spain

LGC Standards S.L.U.
Tel: +34 (0)93 308 4181
Fax: +34 (0)93 307 3612
es@lgcstandards.com

Sweden

LGC Standards AB
Tel: +46 (0)33 20 90 60
Fax: +46 (0)33 20 90 79
se@lgcstandards.com

Turkey

Tel: +90 216 360 0870
tur@lgcstandards.com

United Kingdom

Tel: +44 (0)20 8943 8480
Fax: +44 (0)20 8943 8405
uksales@lgcstandards.com

USA + Canada

Tel: 1-855-LGC-USA1
lgcusa@lgcstandards.com

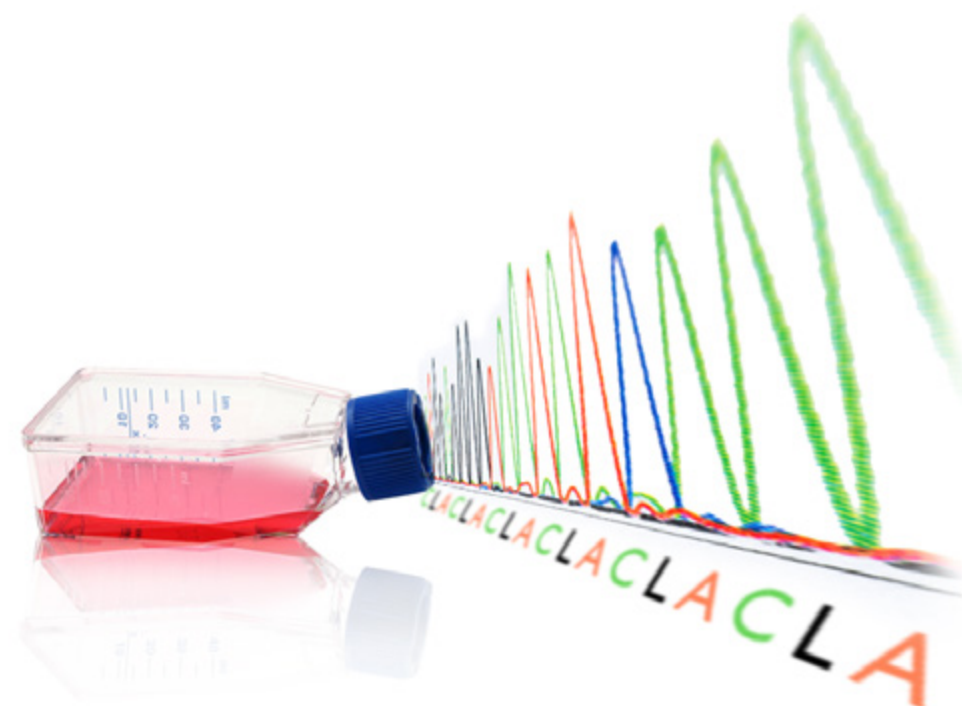


www.lgcstandards.com/authenticate



Excellence through measurement

Cell Line Authentication care plan



Unauthenticated cell lines pose a real risk to your scientific research

- Published reports show that up to 36% of cell lines used by researchers are either misidentified or contaminated with other cell lines¹
- Sharing cell lines is one of the main factors that increases misidentification
- High impact journals now require cell identity to be authenticated using Short Tandem Repeat (STR) profiling prior to publication
- Using unauthenticated cell lines can lead to months or years of wasted research

What can you do?

Cell line authentication by STR profiling can be technically difficult and time consuming. Therefore, in order to help you keep your research on track while maintaining the integrity of your data, LGC Standards has developed the first commercially available cell line authentication (CLA) care plan.

The care plan

The CLA care plan works like a routine health check for your cell lines. You decide on the number of authentications you need during the course of your research. We send you our proprietary transport buffer, perform a PowerPlex 16HS STR analysis, compare the results against our database to identify the cell line and provide you with a comprehensive report.

If we identify that your cells have become contaminated* during the plan, you will receive a discount on replacing that cell line with the same or equivalent ATCC® cell line.

There are 3 levels of the care plan to choose from, depending on your individual authentication needs (see table).

Features	Gold	Silver	Bronze
Number of Cell Line Authentications	More than 15	Between 5-15	Less than 5
Discount against standard CLA price**	25%	15%	10%
Transport Buffer (TB)	✓	✓	✓
Replacement cell line discount	20%	15%	10%
PowerPlex 16HS	✓	✓	✓
Length of care plan	2 years	1 year	1 year
Cell line STR Profile database comparison	✓	✓	✓

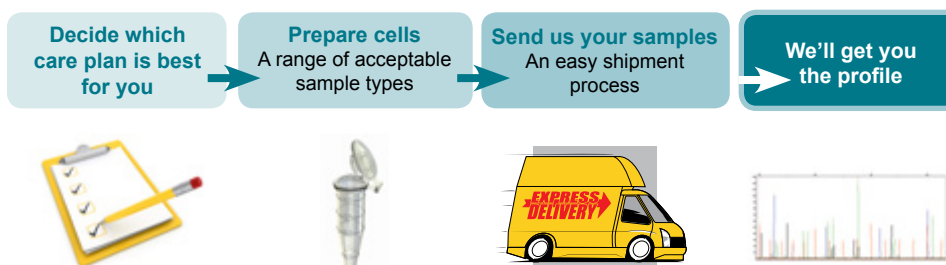
*Contamination refers to cross-contamination with another mammalian cell line and does not cover microbial contamination.

**Discount compared to standard service price

Who could benefit from the CLA care plan?

- Scientists purchasing cell lines which will be used in their research for up to a year or more
- Scientists obtaining cell lines from colleagues and wanting a QC check
- Research teams using several different cell lines and wishing to avoid cross-contamination
- Shared research laboratories accessed by multiple groups
- Scientists wishing to publish their research in high-impact journals

How does it work?



1 Decide which care plan is best for you

2 Prepare your cells

Simply put a sample of your cells into the LGC Standards proprietary transport buffer which we will send you when you're ready for authentication.

3 Send us your samples

Send us your samples along with your order form, and leave everything else to our CLA Team. We will extract and amplify the DNA from your sample and analyse the data with GeneMapper ID software.

4 We'll get you the profile!

Once the STR analysis is complete, you will receive a comprehensive report both electronically and via post.