

Cell line authentication

Are the cells in your laboratory still what they once were? A *biotechniques* review of recent studies have estimated that on average 15.9% of continuous cell lines used in medical research are not correctly identified.⁽¹⁾

The NIH has acknowledged that “misidentification of cell cultures is a serious problem”.⁽²⁾

Cell lines obtained from unofficial sources, including colleagues or collaborators, rather than a recognised repository such as ATCC® may increase the risk associated with cell line misidentification. Groups who maintain immortal cell lines over many years without any formal authentication procedures may also increase this risk.

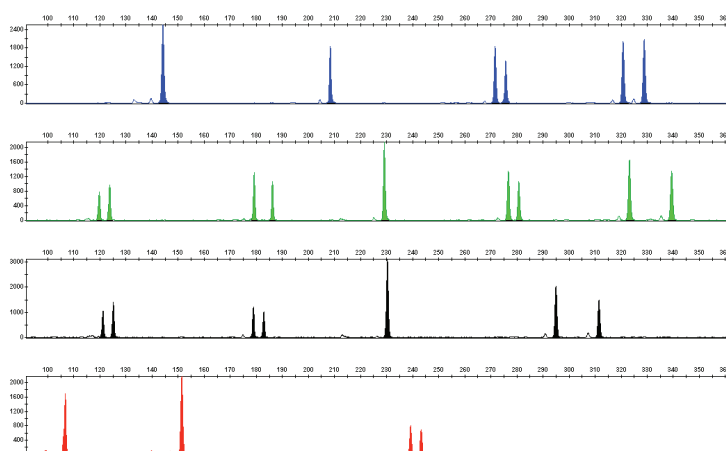
Regardless of origin there is a very real risk of cell line cross-contamination.

A growing number of high impact journals including *biotechniques* and *Cancer Research* now require information on the authentication of any cell line used in the study prior to reviewing a submitted paper. *Nature* has indicated that cell line authentication will soon be required prior to submission publication.⁽³⁾

One of the most commonly accepted cell authentication techniques is short tandem repeat (STR) profiling which LGC, as the largest privately owned forensic science service provider in the UK, is highly experienced. In addition, LGC delivers state-of-the-art DNA familial testing services in Germany operating in both Berlin and Cologne.

LGC Standards as Europe’s partner for ATCC, provides European researchers access to ATCC fully authenticated cell lines. The extensive ATCC quality programme ensures that each vial in the ATCC general collection is free from contamination and tested to confirm cell line integrity and pedigree.

LGC Standards experience in STR profiling and cell biology expertise gained through our collaboration with ATCC enables the provision of a fully supported cell line authentication program.



Cell authentication from LGC Standards

LGC Standards is pleased to now offer STR profiling and a range of cell line authentication services designed to support your research. LGC Standards genotyping laboratories are equipped with state of the art equipment and are able to generate genotypes from a variety of different sample types.

Loci	ATCC® reference profile	16 Loci Service PowerPlex® 16HS	Identifier® (17025 certified service)
Amelogenin	•	•	•
CSF1PO	•	•	•
D13S317	•	•	•
D16S539	•	•	•
D18S51		•	•
D19S5433			•
D21S11		•	•
D2S1383			•
D3S1358		•	•
D5S818	•	•	•
D7S820	•	•	•
D8S1179	•	•	•
FGA		•	•
Penta D		•	
Penta E		•	
TH01	•	•	•
TP0X	•	•	•
vWA	•	•	•

LGC Standards cell line authentication programme offers researchers an inexpensive service which provides peace of mind and increased confidence in research results.

References

(1) McCormick; BioTechniques, Vol 45, No.1, 2008. (2) NOT-OD-08-017: Notice NIH. (3) Editorial, Nature 457, 935-936 (19/02/09).

For further information or to discuss your cell line authentication needs please contact your local LGC Standards office or email us atcc@lgcstandards.com

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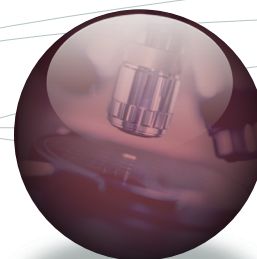
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