

Test Your Cell Lines - Make Your Research Reliable!

Reliable Results
Easy Sample Shipment and Handling
Multiple Organisms

Why Test Cell Lines?

It is a fact that cross-contamination and misidentification of mammalian cell cultures is widespread. An incredible high number of 15-20% of all cell line based biomedical research is affected by misidentified cell lines. Therefore, it has become a necessity for any in vitro cell culture experiments to use unambiguously characterized cell lines to get reliable and reproducible results. Moreover, more and more journals (not only the high-impact ones!) are requesting the authentication of cell lines as prerequisite for acceptance of manuscripts. Microsynth has over 10 years of experience in genotyping and offers an easy-to-use service for human and mouse cell lines. Rely on our experience and make your research reliable!

Your Benefits Include

Easy Sample Handling - Just send us your cell line at room temperature (see step-by-step protocol on the reverse of this flyer). We will isolate and genotype your cell lines and return an analysis report including electropherogram.

Easy Sample Shipment - Just place the cell lines in one of the collection boxes of Microsynth/Seqlab in Germany, Austria or Switzerland. Alternatively send the cell lines with

your preferred postal service at room temperature.

Reliable Results - Microsynth has over 10 years of experience in genotyping and results are summarized in a meaningful analysis report.

Additional Services available at an extra charge:

- Database-Authentication: comparison of the DNA profile (i.e. ATCC)
- mycoplasma contamination testing of cell culture supernatant

ANNOUNCEMENT

Time to tackle cells' mistaken identity

The differences between a cow and a monkey are clear. It is easy to tell a moth from a mosquito. So why are there still scientific studies that mix them up? The answer is simple: hundreds of cell lines stored and used by modern laboratories have been wrongly identified. Some pig cells are labelled as coming from a chicken; cell lines advertised as human have been shown to contain material from hamsters, rats, mice and monkeys.

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Multiple Organisms - Currently a standard cell line typing service is offered for human and mouse cell lines. However, we could expand the service to any other organisms on demand. In cooperation with our subsidiary ecogenics GmbH, we are able to develop high-quality microsatellite markers for virtually any organisms. Contact us to discuss your specific needs!

New Customer?

Test the cell line typing service for a reduced price!

Email us at genotyping@microsynth.ch

And get your testing code.

How to Order the Cell Line Typing Service?

Download the order form at www.microsynth.ch

Prepare samples (see reverse) and drop them in the closest collection box

Receive the results of the analysis within one week (CH) / two weeks (ROW)

Need More Information?

Call us at +41 71 726 10 00 or

Email us at genotyping@microsynth.ch



Certification according to ISO 9001:2015



Accreditation according to EN ISO 17025:2005

DNA Sanger Sequencing
Next Generation Sequencing
Paternity Testing

Step-by-Step Protocol

Easy Sample Preparation - Send Cells, DNA or Culture Supernatant
Meaningful Analysis Report - Results with Comments and Conclusions

Easy Sample Preparation

- Collect 1.0-5.0 Mio cells and wash the cell pellet twice in PBS or another appropriate buffer. Resuspend cell pellet in 0.5 ml of 70-90% ethanol and transfer to a 1.5 ml screw cap / safe-lock tube.
- If you send DNA please provide us with $\geq 30 \mu\text{l}$ gDNA at a concentration of $\geq 10 \text{ ng}/\mu\text{l}$ in Tris or low-EDTA buffer (10 mM Tris, 0.1 mM EDTA).

- For mycoplasma testing please send 100 μl of the culture supernatant directly.
- Download the order form, complete the order form and send a copy to genotyping@microsynth.ch.
- Print the order form and put it together with the samples in a plastic bag or envelope. Drop the samples in the next collection box. To find the

closest collection point please login the webshop at www.microsynth.ch and click "Options & Preferences" under DNA sequencing and find details under "Collection Points".

- We will confirm the receipt of your samples and ship back the analysis results within two weeks.

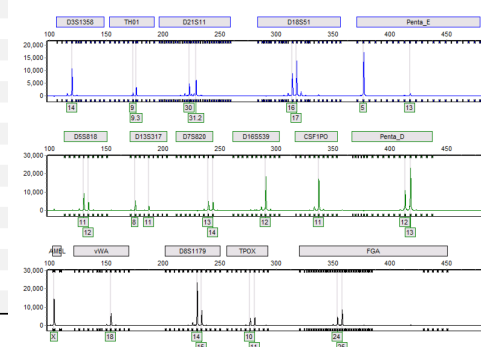
Meaningful Analysis Report

- Allele data for the strains tested including any comments for possible contaminations with other cell lines of the same organism.
- Screenshot of the electropherogram allowing a view on the allele calling.
- Short conclusion of the STR analysis and any additional services such as mycoplasma testing (discrete report) and/or database comparison.

1. Summary Table of the STR Profile

Locus	Chromosomal Location	ATCC Marker	Customer Sample Typed Alleles	Database Alleles	Comments
D3S1358	Chr03		14		
TH01	Chr11	Yes	9/9.3		
D21S11	Chr21		30/31.2		
D18S51	Chr18		16/17		
Penta_E	Chr15		5/13		
D5S818	Chr05	Yes	11/12		
D13S317	Chr13	Yes	8/11		
D7S820	Chr07	Yes	13/14		
D16S539	Chr16	Yes	12		
CSF1PO	Chr05	Yes	11		
Penta_D	Chr21		12/13		
AMEL	X/Y	Yes	X		
vWA	Chr12	Yes	18		
D8S1179	Chr08		14/15		
TPOX	Chr2	Yes	10/11		
FGA	Chr04		24/25		

2. Electropherogram



Further Reading

1. ATCC SDO Workgroup ASN-0002 (2010). Cell line misidentification: the beginning of the end. *Nature Rev. Cancer* 10: 441-448.
2. Barallon, R. et al (2010). Recommendation of short tandem

3. Chatterjee, R. (2007). Cases of Mistaken Identity. *Science*; 315: 928-931.

4. Almeida, J. et al (2013). Mouse cell line authentication. *Cytotechnology* 66: 133-147.
5. Yu, M. et al. (2015). A resource for cell line authentication, annotation and quality control. *Nature* 520:307-311.

Need More Information?

Call us at +41 71 726 10 00 or

E-mail us at genotyping@microsynth.ch