

Integrity, Reliability & Quality

Cell Line Authentication at Pitt



- ◆ As many as 30% of research cell lines are misidentified.
- ◆ How can you not afford to have your cell lines validated?
- ◆ Human cell line authentication is available here on the University of Pittsburgh Campus in the Cell Culture and Cytogenetics Facility (CCCF) at Pitt Public Health.

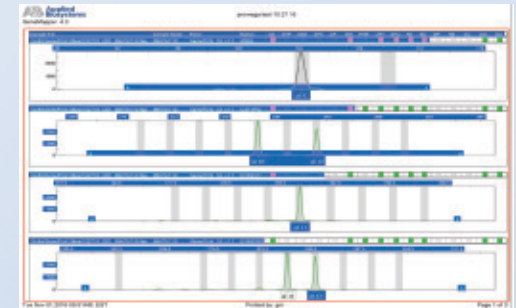
When should I validate my cell lines?

- ◆ At the beginning & at intervals during each project using cell lines.
- ◆ All newly obtained cell lines.
- ◆ Authentication is mandated for NIH-funded research involving cell lines and for many journals.

How are cell lines authenticated?

- ◆ By analyzing the unique Short Tandem Repeat (STR) profiles in the DNA.
- ◆ By comparing the results with established profiles in databases or with DNA from the same patient.
- ◆ We examine nine microsatellites & amelogenin for gender ID.

	Cell line 1	Cell line 2
Amelogenin	X,Y	X,X
CSFIPO	12,12	10,12
D13S317	9,11	11,11
D16S539	9,13	11,12
D21S11	29,31.2	30,30
D5S818	12,12	11,11
D7S820	8,11	10,11
TH01	6,9.3	8,9.3
TPOX	11,11	8,8
V WA	16,19	17,18



What specimen do I need for testing? How soon will I get results?

- ◆ Specimen submission is easy.
- ◆ Simply provide us with at least 10 µL of DNA at known concentration.
- ◆ Results are available in about a week.

Will testing satisfy NIH grant application and journal manuscript editor concerns?

- ◆ Yes.
- ◆ Cell line authentication puts your lab in compliance with NIH and journal requirements, and
- ◆ Gives you peace of mind, knowing that your cell lines are not misidentified.

Can I trust the results?

- ◆ The STR profiling kit we use has been validated and provides very consistent results.
- ◆ We provide facility users with free consultation, high-quality service, and authentication documentation.

Additional validation services are available, including intra- and interspecies contamination and *Mycoplasma* testing.



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