

## Q&A ATCC® Excellence in Research Webinar “ATCC – Sophisticated approaches to *in vitro* research”

### General Questions

1. Will we be able to download the presentation?  
This presentation will be available to watch on demand [here](#).
2. Does ATCC perform karyotype analysis on cell lines?  
ATCC is now using STR analysis because it has a greater resolving power than karyotype analysis. Karyotype analysis is performed when we want to evaluate the genomic stability of hTERT immortalized cells or when we assess the maintenance of pluripotency in the induced pluripotent stem cells.
3. How many different Tumor Cell Panels are there?  
ATCC has 30 Tumor Cell Panels available.
4. Where can I find the genomic information for your cell lines?  
The continuous cell lines have been annotated using the cosmic database. This information is now listed for the cell lines when you search them through the ATCC website. Alternatively you can search the COSMIC database as well.
5. What is the difference between primary microvascular endothelial cells and the hTERT immortalized microvascular cell lines?  
Primary microvascular endothelial cells may grow for 15 population doublings (PD) until they become senescent and undergo growth arrest. The hTERT immortalized cell lines can grow for more than 25 population doublings and are not limited by replicative cellular senescence.
6. How can you verify the success of cell immortalization with the hTERT plasmid?  
Several methods exist for assessing cells that have been immortalized with hTERT. These methods include:
  1. Telomere Repeat Amplification Protocol (TRAP) assay
  2. Karyotyping
  3. Observe morphology and growth over 25 to 50 PDLs (population doubling levels)
  4. Track expression of significant proteins in early and late passage cells
7. Is there a control cell line included in the panels? How do I choose an appropriate control cell line?  
It depends on the individual panel. The ATCC Genetic Alteration Panels, which focus on cancer genes or key components of cell signaling pathways, may include a wild type

control cell line of a specific gene (such as p53 hotspot mutation cell panels). If a wild type control cell line is not included in the panel, recommended wild type control cell lines can be ordered separately within the panel datasheet (such as EGFR genetic alteration tumor cell panel).

Control cell lines are not included in Tumor Cell Panels organized by tissue type. The researcher can choose normal tissue derived cell lines, primary normal tissue cells, or hTERT immortalized normal tissue cells as control for tumor cells.

8. Can the HEK cells be stably transfected?

Although the HEK cells are transiently transfected they can be modified for stable transfection by using selective pressure with blasticidin. Stable transfections are mostly desired when investigators are trying to produce a large volume of functional protein.

9. What is the transfection efficiency seen with the HEK System?

We have observed a high transfection efficiency of 70%.

10. You mentioned that ATCC has a mycoplasma detection kit. Would you please provide more information on the kit?

The mycoplasma detection kit from ATCC is a PCR-based kit which was developed here at ATCC to detect 60 different mycoplasma species. Mycoplasma contamination is a common occurrence, and contamination can interfere with the health of the cells growing in culture. With this kit, we offer a quick and easy way to screen for contamination so that investigators can be confident that the cell lines they are working with are contamination-free. The kit components are all inclusive, and contain PCR primers specific for the 16S ribosomal RNA genes of the mycoplasma species detected in the kit.

11. How often should mycoplasma testing be performed?

This depends on the number of cell lines you are working with and the number of individuals coming in and out of the hood. ATCC performs mycoplasma screening for all of our cell lines, and we suggest that you test for mycoplasma every 3 to 6 months. If mycoplasma is detected, it is important to verify the detection with another method. For those that need it, ATCC offers a mycoplasma testing service where we can grow your cell lines over time to detect mycoplasma activity.

12. Do you have a 3D *in vitro* development model of human primary hepatocytes for toxicity screening?

No not in the foreseeable future.

13. Do HEK cells support secreted protein expression?

Yes, the SEAP data provides supportive evidence that the HEK system can support the expression of functional human secreted proteins.

14. Does the HEK*Plus* cell line add terminal sialic acids to n-linked glycosylation?  
Yes, this system will do normal human post translational modification.
15. How long does it take to generate an immortalized cell line? What is the cost if we request that ATCC generate one for us?  
6 months to a year; have to go through transfection and stable selection process and verification of longevity process.
16. Will ATCC generate an immortalized Human aortic smooth muscle cell line?  
Not in the foreseeable future.
17. Will ATCC immortalize an endometrial epithelial cell line?  
Currently, we do not have an immortalized endometrial epithelial cell line, but we do have an endometrial fibroblast cell line (ATCC<sup>®</sup> CRL-4003<sup>™</sup>). If an investigator in an academic lab has a primary cell that they would like to immortalize, we have the hTERT plasmid that can be used to develop your own immortalized cell line.
18. Will ATCC immortalize any prostate cell lines?  
This will be available by the first quarter of 2015.
19. Does ATCC have any hTERT immortalized cells of the hemopoetic system?  
No, this is not available. We only have an immortalized adipose-derived mesenchymal stem cell (ATCC<sup>®</sup> SCRC-4000<sup>™</sup>). We will have primary CD34 cells from cord blood and bone marrow available June 2014.
20. Is ATCC developing mouse cell lines?  
Yes, we have annotated the major gene mutations for breast cancer for some of the common mouse cell lines used by investigator for the study of breast cancer. These cell lines have been organized into a breast cancer mouse model panel (ATCC<sup>®</sup> TCP-1005<sup>™</sup>).