



Phage Testing for Non-E. coli Cell Banks

The use of a wider range of microbial cells beyond E. coli in biopharma is expanding the potential for novel therapeutics and bioprocesses. It's crucial to develop detection methods for lytic and lysogenic phages in these cells to ensure product safety and process stability, as phage contamination can disrupt production and compromise product integrity.

Our Expertise

Equipped with more than 20 years of experience of testing lytic and lysogenic phage in E coli cell banks, Avance Biosciences team is also skilled in developing and validating novel assays to detect lytic and lysogenic phages in other microbial organisms, such as Salmonella, Staphylococcus, and Streptococcus.

What We Offer

Product Type	Assay Description
Assay Development	<ul style="list-style-type: none"> Identify positive and negative control strains. Identify permissive host strain suitable for phage testing. Develop a method for lysogenic phage induction Develop a plaque testing protocol for lytic phage
Assay Optimization	<ul style="list-style-type: none"> Optimize PFUs for quantifiable plaques. Standardize bacterial lawn preparation. Set incubation conditions for clear plaque visibility Experiment with different induction conditions for specific strains
Validation	<ul style="list-style-type: none"> Develop validation plans for lytic and lysogenic phage detection, respective Validate assay specificity Validate assay limit of detection Prepare a custom SOP(s) for sample testing
Sample Testing	<ul style="list-style-type: none"> Test samples with validated method TAT usually <2 weeks

Key Services (Cont.)

Product Type	Assay Description
Gene-Edited Human Cells	<ul style="list-style-type: none"> • On/Off Target Sites Screening and Verification • On/Off Target Sites Characterization and Quantification • Gene Editing Translocations • Clonality by single-cell sequencing
Stem Cells (HSCs, iPSCs, MSCs)	<ul style="list-style-type: none"> • Flow cytometric analysis of select markers. • Differentiation-specific protein analysis by Western • Hematopoietic colony-forming unit (CFU) analysis by STEMvision™ • reprogramming, differentiation, and maturation analysis • RNA-Seq and Whole-Exome Sequencing (WES)
All Cell Therapy products	<ul style="list-style-type: none"> • Viability/Proliferation testing • Sterility Testing • Endotoxin Testing • Mycoplasma Testing • Adventitious Agent Testing

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