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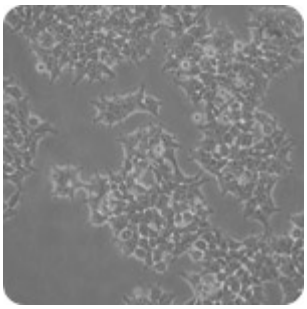
ATCC® THE ESSENTIALS OF LIFE SCIENCE RESEARCH GLOBALLY DELIVERED™

cell passages

ATCC Expression Systems Collection

A good cell culture system can simplify the production and purification of viral particles and proteins, and facilitate the rapid development of novel viral vaccines and other therapeutic modalities. To support these research efforts, ATCC has developed the ATCC Expression Systems Collection. We offer reliable, authenticated cell lines that can be paired with specially selected media and transfection reagents to create cell culture systems for high efficiency protein or viral particle production.

This month, Cell Passages will highlight the Phoenix and Vero cell lines, but make sure to check out all the products in the ATCC Expression Systems Collection. And, since healthy cells are productive cells, be sure to download the ATCC Animal Cell Culture Guide for tips and techniques on getting the best results from your cultures.



Phoenix Cells – *Now Available!*

Retroviral infection is a very efficient method of stably delivering genes to an array of mammalian cell types. The technique, however, depends on the reliable generation and isolation of a retroviral vector. The generation of the retroviral vectors is greatly simplified by using the Phoenix packaging cell lines developed by the Nolan laboratory at Stanford University. These cell lines are variants of the 293T cell line that have been stably transfected to express Moloney Murine Leukemia Virus (M-MLV) viral packaging proteins, so they can support the production of either Ecotropic and Amphotropic retroviruses.

Each line can be efficiently transfected (50% of cells or better) with a retroviral construct, using either calcium phosphate or lipid-based transfection protocols, to reliably produce high viral titers.

- **Phoenix-AMPHO** (ATCC® No. CRL-3213™). Expresses gag-pol and an amphotropic envelope protein, so the resultant viral particles are capable of infecting most dividing mammalian cells.
- **Phoenix-ECO** (ATCC® No. CRL-3214™) Expresses gag-pol and an ecotropic envelope protein, so the resultant viral particles are capable of infecting dividing murine or rat cells.

Share with others:

ATCC Publications

Animal Cell Culture guide

Primary Cell Culture guide

Stem Cell Culture guide

Tech Tip

Q: What are the parameters that will affect my transfection reaction when I am using the HEKPlus Protein Expression System, ATCC® No. ACS-4800-K™?

A: Cell density at transfection, ratio of DNA to GeneX*Plus* reagent, DNA quality and concentration, promoter and size of expression vectors affect transfection efficiency. Refer to the product sheet for GeneX*Plus*, ATCC® No. ACS-4004™ for guidelines on optimal transfection reactions

Have more questions?

- **Phoenix-GP** (ATCC® No. CRL-3215™) Expresses gag-pol, but does not express an envelope protein, and is therefore useful for pseudotyping retroviral virions with non-M-MLV envelope proteins, such as those from the Gibbon ape leukemia or Vesicular stomatitis virus.

- **293T** – ***Coming soon!*** Carries a temperature sensitive T-antigen and can be used to produce protein from any SV40 containing plasmid. This is a human embryonic kidney cell line that has been transformed with adenovirus E1a; it is also the parent line of the Phoenix cell lines.

Serum-Free VERO Cell system

The Vero-SF-ACF (ATCC® No. CCL-81.5™) has been adapted to grow in serum-free, animal component-free media, Vero*Plus* SFM (ATCC® No. ACS-4001™) to provide the ideal system for the *in vitro* propagation of viruses.

Looking for something else? ATCC has a large selection of cell lines, from an array of species, all particularly suited for the propagation of viruses.

Learn more >>

HEK*Plus* Expression system

We united reliable, authenticated HEK 293T/17 SF cells with specially selected media and transfection reagents to create a complete and easy-to-use protein expression system.

- HEK293T/17 SF Suspension Cells (ATCC® No. ACS-4500™)
- HEK*Plus* SFM (ATCC® No. ACS-4002™)
- L-alanyl glutamine, 200 mM (ATCC® No. 30-2115™)
- HEK*Plus* Boost Solution (ATCC® No. ACS-4003™)
- GeneX*Plus* Transfection Reagent (ATCC® No. ACS-4004™)

HEK*Plus* Expression system >>

See data >>

Webinar – *A better style of protein production!*

Kevin Grady
Product Line Business Manager
ATCC Cell Systems

Register for this webinar to learn how different protein expression systems, transfections reagents and culturing practices can affect the success of your experiments.

Also, we will demonstrate how the ATCC® HEK*Plus* Expression System can help simplify your experiments and move your research forward.

Watch now >>

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