

PRODUCT SPOTLIGHT

POWERING THE FUTURE OF BIOPRODUCTION: SPOTLIGHT ON OUR CELL LINE INNOVATIONS

Biological products include a wide range of complex substances such as vaccines, gene therapies, monoclonal antibodies, and recombinant therapeutic proteins. In contrast to most drugs that are chemically synthesized, biologics are manufactured in living cells. The demand for viruses and therapeutic macromolecules produced from mammalian cell culture is increasing along with the number of biopharmaceuticals that are currently in preclinical stage of development. In this regard, ATCC provides a variety of products that support the development and sterility testing of biologics.

- **Virus and protein production** – We offer both commonly used bioproduction cell lines for virus and protein manufacturing as well as STAT1 knockout models for enhanced virus production.
- **Gene therapy development** – ATCC provides a STAT1 BAX double knockout model for the enhanced production of adeno-associated viruses.

Table 1: Available Cell Lines for Bioproduction

ATCC® No.	Designation	Application	Notes
CRL-1573™	293 [HEK-293]	Protein production, virus production	Suitable for producing adenoviruses
CRL-1573-VHG™	293. STAT1 BAX KO	Protein production, virus production	CRISPR edited for enhanced virus production, has high value for use in gene therapy development
CRL-3216™	HEK293T	Protein production, virus production	Gives high titers when used to produce retroviruses; widely used for retroviral production, gene expression and protein production
CRL-11268™	HEK 293T/17	Protein production, virus production	A highly transfectable derivative of the 293 cell line
CRL-1573.3™	HEK-293.2sus	Protein production, virus production	Progressively adapted from an anchorage-dependent growth mode to a suspension mode
ACS-4500™	293T/17 SF [HEK 293T/17 SF]	Protein production, virus production	Adapted to serum-free medium and suspension
CRL-3467™	293TT	Protein production, virus production	Has applications for production of papillomavirus and polyomavirus-based reporter vectors, as well as propagation of torque teno viruses, BK and JC polyomavirus primary isolates
CRL-3537™	293SF-3F6	Protein production, virus production	Adapted to suspension serum-free culture
CCL-61™	CHO-K1	Protein production	One of the most-used cell lines for protein production
CCL-61.4™	CHO-K1.Sus[Sf]	Protein production	One of the most-used cell lines for protein production
CRL-3440™	Agarabi CHO	Protein production	An industrially-relevant research material that can be used in the study of continuous biomanufacturing, process analytical technology, and bioprocess design
CRL-3634™	DG44	Protein production	A CHO (ATCC® CCL-61™) derivative which is dihydrofolate reductase (DHFR)- deficient
CRL-3635™	DXB11	Protein production	A CHO (ATCC® CCL-61™) derivative which is dihydrofolate reductase (DHFR)- deficient

ATCC® No.	Designation	Application	Notes
CCL-81™	Vero	Protein production, virus production	One of the most-used cell lines for vaccine development.
CCL-81-VHG™	Vero.STAT1 KO	Protein production, virus production	CRISPR edited for enhanced virus production
CCL-81.2™	Vero, Select	Protein production, virus production	Vaccine development, protein expression
CCL-81.4™	cGMP Vero	Protein production, virus production	Can be used in manufacturing processes under cGMP guidelines
CCL-81.5™	Vero-SF-ACF	Protein production, virus production	Adapted to serum-free and animal component-free medium
CCL-34™	MDCK (NBL-2)	Virus production	Used in vaccine development
CCL-34-VHG™	MDCK.STAT1 KO	Virus production	CRISPR edited for enhanced virus production
CCL-34.1™	DoCl1 (S+L-)	Virus production	Derivative of MDCK (ATCC® CCL-34™) cells; has been used in studies focusing on dendritic cell-based vaccines for conditions such as chronic lymphocytic leukemia
CCL-185™	A549	Virus production	Suitable for producing adenoviruses
CCL-10™	BHK-21 [C-13]	Virus production	Used in vaccine development
HTB-55™	Calu-3	Virus production	This cell line is valuable for SARS-CoV-2 propagation in vitro
CCL-2™	HeLa	Virus production	Instrumental in the development of multiple vaccines, including those for polio, human papilloma virus, COVID-19
CCL-2.1™	HeLa 229	Virus production	Can be adapted to suspension culture conditions
CCL-2.2™	HeLa S3	Virus production	Can be adapted to suspension culture conditions
CRM-CCL-2™	HeLa; Certified Reference Material	Virus production	For use in testing and calibration in ISO 17025 accredited laboratories
CCL-121™	HT-1080 [HT1080]	Virus production	Susceptible to infection by human poliovirus 1, RD-114 feline virus, feline leukemia virus, vesicular stomatitis virus
CCL-171™	MRC-5	Virus production	Used in the production of vaccines, including hepatitis A, polio, and MCR-5
CCL-33™	PK(15) [PK15, PK-15]	Virus production	Susceptible to infection by multiple swine and human virus strains
CRL-1711™	Sf9	Protein production	This cell line can be used to replicate baculovirus expression vectors
CRL-3357™	Sf9-ET	Protein production	Modified to express eGFP upon infection with baculovirus
CRL-1581™	Sp2/0-Ag14	Antibody production	This cell line is a fusion partner for production of somatic cell hybrids
CRL-8287™	Sp2/0-Ag14	Antibody production	This cell line is a fusion partner for production of somatic cell hybrids
CCL-75™	WI-38	Virus production	The first human diploid cell line to be used in human vaccine preparation
CCL-75.1™	WI-38 VA-13 subline 2RA	Virus production	Susceptible to human poliovirus 2
CRL-1662™	YB2/0 [YB2/3HL. P2.G11.16Ag.20]	Antibody production	The cells are resistant to 8-azaguanine, are HAT sensitive, and can be used as a fusion partner for rat B cells to make rat - rat hybridomas
CRL-3726™	NB324K	Antibody production	The cells are resistant to 8-azaguanine, are HAT sensitive, and can be used as a fusion partner for rat B cells to make rat - rat hybridomas

Learn more at www.atcc.org/biologics-production

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