SVG p12

305878

GENERAL INFORMATION

Description

SVG p12 is a human fetal glial cell line originally derived from fetal brain tissue and immortalized via transformation with SV40 large T antigen. It has been widely used as a model for studying neurotropic polyomaviruses, particularly JC polyomavirus (JCPyV), due to its glial origin and high permissiveness for viral infection. SVG p12 retains characteristics of astrocytic lineage and supports productive infection and propagation of JCPyV, making it a standard in vitro system for studying viral tropism, replication, and pathogenesis in glial cells.
However, subsequent analysis has revealed that SVG p12 was contaminated with BK polyomavirus (BKPyV) after being deposited into cell repositories. Detection of BKPyV DNA and infectious virus in SVG p12 lines acquired from some culture collections has raised concerns regarding the integrity of experimental data derived from these cells. The contamination does not extend to all SVG-derived lines, as clones such as SVG-A have tested negative for BKPyV, suggesting that the contamination occurred during handling or distribution, rather than during the original derivation of the cell line.
Due to its established use and robust responsiveness to polyomavirus infection, SVG p12 remains a key tool in virology research, particularly in the context of human neurovirology. Nevertheless, it is now recommended that researchers using this cell line verify the absence of BKPyV contamination in their stocks to ensure experimental reproducibility and data reliability.

Tissue	Fetal brain

Synonyms

- SVGp12
- SVG(P12)

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Adherent
GMO status	GMO-S1

GMO status details

GMO-S1: This human fetal glial cell line (SVG p12) contains SV40 Large T-Antigen sequences with an ori mutation and is additionally contaminated with BK polyomavirus strain UT, without deliberate genetic engineering of the contaminant. The SV40 insert is stably integrated. This classification applies only within Germany and may differ elsewhere.

Biosafety level	2

CHARACTERISTICS

Morphology	Fibroblast
Cell type	Astrocyte

IDENTIFIERS

Citation

SVG p12 (Cytion catalog number 305878)

NCBI TaxID	9606

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Banking information
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Cellosaurus	CVCL_3797

HANDLING AND CULTURE

Culture medium

EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% FBS

Dissociation reagent	Accutase
Fluid renewal	2 to 3 times per week

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required.
For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently.
Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth.
Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

QUALITY CONTROL AND CRYOPRESERVATION

Sterility

Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods.
To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.

Freeze medium	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

Storage conditions

For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

Shipping conditions

Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.

DONOR

Donor age	8-12 fetus week
Ethnicity	Unspecified

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Disclaimer

Our cells are provided for in vitro laboratory research purposes exclusively and are not intended for clinical or diagnostic use, nor are they to be administered to humans or used for veterinary purposes. Users must adhere to all applicable guidelines and regulations for the handling and use of these cells in a research setting.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Material Transfer Agreement required	Yes

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