Product sheet

SVG p12 Cells | 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.
Organism	Human
Tissue	Fetal brain
Synonyms	SVGp12, SVG(P12)

Characteristics

Age	8-12 fetus week
Gender	Male
Ethnicity	Unspecified
Morphology	Fibroblast
Cell type	Astrocyte
Growth properties	Adherent

Regulatory Data

SVG p12 Cells | 305878

Citation	SVG p12 (Cytion catalog number 305878)
Biosafety level	2
NCBI_TaxID	9606
CellosaurusAccession	CVCL_3797
GMO Status	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.

Biomolecular Data

Mutational profile	

Handling

Culture Medium	EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	Accutase
Fluid renewal	2 to 3 times per week
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.

Thawing and Culturing Cells	1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit. 2. 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. 3. 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. 4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening. 5. 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. 6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium. 7. 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. 8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.
Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
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.
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.

Quality Control & Molecular Analysis

SVG p12 Cells | 305878

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.