Product sheet

SVI Cells | 400495

General information

Description	The SVI cell line has been cloned from the outgrowth of glomeruli which were isolated from H-2kb-tsA58 transgenic mice. The mice carry a temperature-sensitive variant of the SV40 large T antigen under control of the IFN-g-inducible H-2kb promoter. Cells proliferate at 33 degree Celsius, and they differentiate at 37 degree Celsius. At present, the cells have been cultured successfully for more than 40 passages without noting phenotypic changes. SVI are very similar to E11 in terms of morphology and the expression of several markers. For example, podocin and WT1 are expressed to a lesser extent as compared to E11. Differentiation: Start the differentiation process by placing the non-confluent flask(s) into an incubator at 38 degree Celsius / 5% CO2 for a minimum of 14 days to complete the differentiation. Addition of interferon-gamma (INF-gamma) is not necessary.
Organism	Mouse
Tissue	Kidney

Characteristics

Age	Adult
Gender	Unspecified
Cell type	Podocyte
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	SVI (Cytion catalog number 400495)
Biosafety level	1
Depositor	Dr. N. Endlich

Expression / Mutation

Protein expression	WT1, Lmx1b, nephrin, NEPHI, FAT, P-cadherin, CD2AP, ZO-I, podocalyxin, podoplanin, synpo, podocin, TRPC6 and GAPDH.

Handling

Culture Medium	RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	Accutase
Subculturing	Remove the old medium from the adherent cells and wash them with PBS that lacks calcium and magnesium. For T25 flasks, use 3-5 ml of PBS, and for T75 flasks, use 5-10 ml. Then, cover the cells completely with Accutase, using 1-2 ml for T25 flasks and 2.5 ml for T75 flasks. Let the cells incubate at room temperature for 8-10 minutes to detach them. After incubation, gently mix the cells with 10 ml of medium to resuspend them, then centrifuge at 300xg for 3 minutes. Discard the supernatant, resuspend the cells in fresh medium, and transfer them into new flasks that already contain fresh medium.
Split ratio	A ratio of 1:3 to 1:5 is recommended Under differentiation conditions, ie incubation of non to confluent cultures at 38 degree Celsius, cell proliferation ceases within the first two weeks and stops after about four weeks
Seeding density	Inocculate T75 cell culture flasks with 1x 10^4 cells/cm^2 (about 60.000 cells/ml, 12ml medium in one T75) for the proliferation process. Keep the cells at 33 degree Celsius / 5% CO2, until the flask is about 75% confluent.
Fluid renewal	3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
Handling of cryopreserved cultures	SVI cells are shipped in a deep-frozen state on dry ice. Upon receipt, confirm that the vial remains frozen. For storage, place the cryovial immediately at temperatures below -150 degrees. If you plan to culture the cells immediately, swiftly thaw the vial by shaking it in a 37 degrees water bath with clean water and an antimicrobial agent for 40-60 seconds. Remove the vial once a small ice clump persists, ensuring it remains cold. Proceed with all subsequent steps under aseptic conditions. In a sterile flow hood, disinfect the cryovial with 70% ethanol. Then, gently open the vial and transfer the cell suspension into a 15 ml centrifuge tube pre-filled with 8 ml of room temperature culture medium. Gently mix the cells. For cell separation, centrifuge at 300 x g for 3 minutes and dispose of the supernatant. Skipping centrifugation is optional, although any residual freezing medium should be removed after 24 hours. Resuspend the pellet gently in 10 ml of fresh culture medium and divide between two T25 culture flasks. Follow the subculture protocol for subsequent steps.

Quality control / Genetic profile / HLA

Sterility	Mycoplasma contamination is rigorously 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.
STR profile	**Amelogenin**: x,x