E11 Cells | 400494



### **General information**

Description	<ul> <li>The E11 cell line has been meticulously cloned from the outgrowth of glomeruli, which were isolated from H-2kb-tsA58 transgenic mice. These transgenic mice carry a temperature-sensitive variant of the SV40 large T antigen, under the precise control of the IFN-g-inducible H-2kb promoter.</li> <li>This intricate genetic arrangement ensures the controlled development and sustained viability of the E11 cell line. One of the most remarkable attributes of the E11 cell line is its exceptional stability. Researchers have successfully propagated these cells for more than 40 passages without any observed phenotypic alterations.</li> <li>This enduring stability has facilitated rigorous experimentation and in-depth research, making the E11 cell line an ideal candidate for studies in podocyte biology. These cells exhibit stable expression of nephrin, a pivotal protein closely associated with podocytes.</li> <li>Furthermore, they display a remarkable capacity for forming abundant cell-cell contacts, a critical characteristic for mimicking the behavior of podocytes in their native environment.</li> <li>E11 cells not only stably express nephrin but also demonstrate the presence of a spectrum of other essential podocyte proteins. This comprehensive protein expression profile includes NEHP1, FAT, P-cadherin, podocin, CD2AP, ZO-1 (?-isoform), Lmx1b, podoplanin, synaptopodin, cortactin, and vimentin.</li> </ul>
Organism	Mouse
Tissue	Kidney

## Characteristics

Age	Adult
Gender	Unspecified
Cell type	Podocyte
Growth properties	Adherent

### Identifiers / Biosafety / Citation

**Citation** E11 (Cytion catalog number 400425)

Biosafety level 1

### **Expression / Mutation**

### **Product sheet**

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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 or 1:5 (at 33 degree Celsius) 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 for the proliferation process. Keep the cells at 33 degree Celsius / 5% CO2, until the flask is about 75% confluent.
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)

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Handling of cryopreserved cultures	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. Optionally, skip centrifugation but remove any remaining freezing medium after 24 hours.
	<ol> <li>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.</li> </ol>
	8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

# Quality control / Genetic profile / HLA

#### 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.