Product sheet

J82 Cells | 305055

General information

Description	The J82 cell line is derived from a human bladder transitional cell carcinoma, offering a robust in vitro model for studying urothelial cancer. These cells exhibit epithelial morphology and are adherent in culture, making them suitable for a variety of experimental applications, including cancer biology research, drug screening, and molecular analysis. J82 cells are known to express markers characteristic of bladder carcinoma, including cytokeratins, which are valuable for understanding the molecular pathways involved in bladder cancer progression and for identifying potential therapeutic targets. The J82 cell line is particularly useful for studies focusing on the mechanisms of drug resistance, metastasis, and the role of genetic mutations in bladder cancer. Researchers have utilized this cell line to explore the effects of chemotherapeutic agents and to identify novel compounds that may inhibit cancer cell growth. Additionally, J82 cells are frequently used in gene expression studies to investigate the regulation of oncogenes and tumor suppressor genes within the context of bladder cancer. As with all cancer cell lines, J82 should be handled under strict laboratory conditions, ensuring its use is restricted to research applications and not for any therapeutic or in vivo purposes.
Organism	Human
Tissue	Urinary bladder
Disease	Bladder carcinoma
Synonyms	J-82, J 82, J82COT, J82 COT

Characteristics

Age	58 years
Gender	Male
Ethnicity	European
Morphology	Epithelial
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	J82 (Cytion catalog number 305055)

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Biosafety level	1

Expression / Mutation

Antigen expression	HLA A2, Aw32, B5, B12, Cw5, Blood Type A
Tumorigenic	Yes

Handling

Culture Medium	EMEM, w: 2 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: EBSS, w: 1 mM Sodium pyruvate, w: NEAA (Cytion article number 820100c)
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	1:2 to 1:4
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100)

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.
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.

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.

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STR profile

Amelogenin: x,y
CSF1PO: 10,11
D13S317: 10,12
D16S539: 11,12
D5S818: 12,13
D7S820: 9,11
TH01: 09. Mrz
TPOX: 11,12
vWA: 17,18
D3S1358: 16,18
D21S11: 30,31
D18S51: 10,12
Penta E: 12,15
Penta D: 9,13
D8S1179: 8,13
FGA: 20,24
D1S1656: 14
D6S1043: 19
D2S1338: 19
D12S391: 24
D19S433: 12,13