

15P-1 Cells | 305191

General information

Description

15p-1 cells are a mammalian cell line derived from *Mus musculus*, specifically utilized for the study of cellular responses to steroid hormones. Originating from the testicular tissue of mice, these cells exhibit a unique sensitivity to androgens, which makes them particularly valuable in endocrinology and cancer research. The 15p-1 cell line expresses the androgen receptor (AR), enabling the study of androgenic effects on gene expression, cell growth, and differentiation processes.

Characteristically, 15p-1 cells are used to explore the molecular pathways influenced by androgens and their role in diseases such as prostate cancer. They provide a controlled *in vitro* environment to dissect the interactions between androgens and their cellular receptors, facilitating insights into both normal physiological and pathological states. This cell line is also instrumental in screening potential pharmaceuticals targeting androgen-related pathways, contributing to the development of therapeutic strategies.

Maintained under standard cell culture conditions, 15p-1 cells require a medium enriched with fetal bovine serum (FBS) and an optimal temperature of 37°C, along with a CO₂ concentration of 5% to mimic physiological conditions. Rigorous quality control is essential to preserve their genetic and phenotypic characteristics, ensuring reliable and reproducible results in research applications.

Organism Mouse, transgenic

Tissue Testis

Characteristics

Age 6 months

Gender Male

Morphology Epithelial

Growth properties Adherent

Identifiers / Biosafety / Citation

Citation 15P-1 (Cytion catalog number 305191)

Biosafety level 1

Expression / Mutation

15P-1 Cells | 305191**Handling**

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO ₃ , w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
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Medium supplements	Supplement the medium with 10% FBS
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Passaging solution	Accutase
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Subculturing	First, 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.
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Split ratio	1:2 to 1:5
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Fluid renewal	2 to 3 times per week
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Freeze medium	CM-1 (Cytion catalog number 800100)
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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.
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.