A7R5 Cells

Product information

Cell line	A7R5
Organism	*Rattus norvegicus*, rat
Tissue	Heart; Aortic thoracic/smooth muscle
Product format	1 x 10^6 Cells/Frozen vial
Cell morphology	Fibroblast
Growth properties	Adhesive growth
Culture medium	DMEM (containing 1.5 g/L $NaHCO_3$) +10%FBS+1% P/S
Culture conditions	95% air, 5% CO_2, 37°C
Passage ratio	1:2-1:3
Cryopreservation	Serum-Free Cell Freezing Medium
Cell description	A7R5 cells are isolated from aortic thoracic smooth muscle of an embryonic rat, which is ideal for cardiovascular disease research.

Protocol

1. Cell reception

1) Upon receipt, please check the package. Take photos and contact us within 3 days if any abnormalities such as dry ice has ran out, the vial is broken or thawed.

2) Directly proceed to cell thawing, or transfer the vial to liquid nitrogen or store briefly at -80°C freezer.

3) Quickly thaw the vial in a 37°C water bath with shaking. Keep the cap out of the water to avoid cell contamination. When the cells are almost thawed (only a little ice crystal remains), stop the water bath, and continue to shake the vial until the ice crystal melts.

4) Wipe the surface of the vial with 75% alcohol. Carefully transfer cells to centrifuge tubes containing 5 mL of pre-warmed complete medium. Centrifuge cells at 1000 rpm for 5 min.

5) Discard the supernatant, resuspend cells with 4-6 mL of complete medium, and seed in a T25 vial (or 6 cm plate).

6) Culture overnight, change the medium the next day. After that, change the medium every 2-3 days until the cell density reaches 80-90% for passage.

*Note: If the cells are in poor condition after thawing, contact us in time and we can resend the product once for free.

2. Cell passage (80-90% cell density)

1) Discard the medium, wash cells 1-2 times with PBS.

2) Add 1-2 mL of 0.25% Trypsin-EDTA Solution, gently shake the flask to infiltrate all cells. Place the flask at 37°C for 1-2 min.

3) Observe cells under the microscope. Terminate the dissociation when most of the cells become round and fall off.

4) Immediately add more than 5 mL of complete medium containing 10% serum to terminate the dissociation. Gently pipette up and down to flush down the cells. Transfer the cells to a tube and centrifuge at 1000 rpm for 5-8 min.

5) Discard the supernatant, resuspend the cells with 1-2 mL of complete medium.

6) Seed the cell suspension into new T25 flasks or 6 cm plates in a 1:2-1:3 ratio, then adjust the volume up to 5-6 mL of complete medium per Flask.

3. Cell cryopreservation

1) Discard the medium, wash cells 1-2 times with PBS.

2) Add 1-2 mL of 0.25% Trypsin-EDTA Solution, gently shake the flask to infiltrate all cells. Place the flask at 37°C for 1-2 min.

3) Observe cells under the microscope. Terminate the dissociation when most of the cells become round and fall off.

4) Immediately add more than 5 mL of complete medium containing 10% serum to terminate the dissociation. Gently pipette up and down to flush down the cells. Transfer the cells to a tube and centrifuge at 1000 rpm for 5-8 min.

5) Discard the supernatant, gently resuspend the cells in an appropriate volume of Cell Freezing Medium at a concentration of $5x10^6$-$1x10^7$ cells/mL.

6) Aliquot the cell suspension into labeled sterile cryovials and tighten the cap of the cryovials.

*Note: Always use sterile cryovials to store frozen cells. Do not use centrifugal tubes instead of cryovials. Centrifugal tubes don't reliably seal and may fill with liquid nitrogen when frozen, leading them to burst on thawing.

7) Transfer the cryovials into a cell freezing container and immediately store the container at -80ºC for a least 24 h. Then the frozen cells should be transferred to the vapor phase of liquid nitrogen for long-term storage.

*Note: The cryovials in the cell freezing container should be transferred to -80ºC as soon as possible.

Notes

1. For your safety and health, please wear lab coats and gloves during the experiment.

2. For research use only. Not to be used in clinical diagnostic or clinical trials.

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