Product sheet

RBE Cells | 305019

General information

Description	The RBE cell line is a human intrahepatic cholangiocarcinoma (CC) cell line derived from a 64-year-old female patient. This cell line was established alongside a sarcomatoid counterpart (SSP-25) from the same tumor nodule, highlighting the coexistence of adenocarcinoma and sarcomatoid components within a single CC lesion. RBE cells are characterized by their epithelial morphology, growing as a monolayer with a cobblestone-like appearance, which is typical of epithelial cells. Phenotypically, the RBE cell line expresses key markers associated with cholangiocarcinoma. These include cytokeratins CK7 and CK19, gamma-glutamyl transpeptidase (GGT), carcinoembryonic antigen (CEA), carbohydrate antigen 19-9 (CA19-9), and vimentin. Additionally, mucin production is detected in approximately half of the RBE cells, as evidenced by periodic acid-Schiff (PAS) staining. These features confirm the adenocarcinoma origin of RBE cells and distinguish them from the SSP-25 cell line, which lacks CEA, CA19-9, and mucin expression.
Organism	Human
Tissue	Bile duct
Disease	Intrahepatic cholangiocarcinoma

Characteristics

Age	64 years
Gender	Female
Morphology	Epithelial
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	RBE (Cytion catalog number 305019)
Biosafety level	1

Expression / Mutation

Handling

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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	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.