Product sheet

RCC-KL Cells | 300281

Renseignements généraux

Description	The RCC-KL cell line is derived from renal cell carcinoma (RCC), a common type of kidney cancer that typically arises from the epithelial cells of the kidney's proximal tubules. RCC-KL is utilized as an in vitro model to study the biological and pathological mechanisms underlying renal cell carcinoma. Researchers commonly employ RCC cell lines like RCC-KL to investigate cancer growth, invasion, and therapeutic responses in the context of kidney cancer. Although detailed genetic information on RCC-KL is limited, renal cell carcinoma models are often used to explore the roles of key pathways involved in cancer progression, including those related to hypoxia, angiogenesis, and immune evasion. As such, RCC-KL may be valuable for studying drug responses and testing novel therapeutic agents, which is critical for developing improved treatments for kidney cancer. Given the complexity of RCC, cell lines like RCC-KL are instrumental in preclinical research focused on understanding drug resistance mechanisms and the interactions between cancer cells and the immune system. However, further characterization and published research are needed to fully elucidate the specific features and applications of RCC-KL in scientific studies.
Organism	Human
Tissue	Kidney
Disease	Clear cell renal cell carcinoma
Synonyms	RCCKL

Caractéristiques

Age	51 years
Gender	Male
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Monolayer, adherent

Données réglementaires

Citation	RCC-KL (Cytion catalog number 300281)

RCC-KL Cells | 300281

Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_5881

Données biomoléculaires

Protein expression	IL8
Mutational profile	IL8 RS1126647 3-UTR SNP A>T

Manipulation

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	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.
Fluid renewal	1 to 2 times per week
Freeze medium	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

RCC-KL Cells | 300281

Thawing and Culturing Cells	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.
Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
Shipping Conditions	Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.
Storage Conditions	For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

Contrôle de la qualité et analyse moléculaire

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.