Product sheet

SCaBER Cells | 305111

General information

Description	The SCaBER cell line is derived from a human squamous cell carcinoma of the urinary bladder. Originating from a 58-year-old male patient, this cell line retains many of the original tumor's features, including its squamous differentiation. SCaBER cells display a distinct epithelial morphology with prominent intercellular connections such as desmosomes and interdigitated microvilli. These characteristics make it an excellent model for studying the pathology and progression of squamous cell carcinoma in the bladder. SCaBER cells exhibit a hypotetraploid karyotype with a highly variable chromosomal number and the presence of distinctive marker chromosomes. The male karyotype includes both X and Y chromosomes, further distinguishing it from other cell lines. Ultrastructural studies reveal abundant tonofilaments, lipid bodies, and well-developed organelles such as the Golgi apparatus and rough endoplasmic reticulum. These properties have been maintained across multiple passages, ensuring consistency for long-term studies. This cell line has been utilized in immunological research to explore tumor-specific antigens and their role in bladder cancer progression. SCaBER's squamous differentiation is a key factor for investigations into tumor-associated antigens in squamous cell carcinomas, offering insights into potential diagnostic markers and therapeutic targets. Its well-characterized molecular and phenotypic properties make it a critical resource in urological cancer research.
Organism	Human
Tissue	Urinary bladder
Disease	Bladder squamous cell carcinoma
Synonyms	SCABER, Scaber

Characteristics

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

Regulatory Data

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Citation	SCaBER (Cytion catalog number 305111)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_3599

Biomolecular Data

Handling

Culture Medium	EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)
Supplements	Supplement the medium with 10% FBS and 1% NEAA
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	2 to 3 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.

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.

Quality Control & Molecular Analysis

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.