

SCaBER Cells | 305111

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

Age 58 years

Gender Male

Ethnicity African

Morphology Epithelial

Growth properties Adherent

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SCaBER Cells | 305111

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 $300 \times g$ 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.

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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.