UM-SCC-129

305727

GENERAL INFORMATION

Description

UM-SCC-129 is a human head and neck squamous cell carcinoma (HNSCC) cell line established from a patient tumor at the University of Michigan Head and Neck Oncology Laboratory. As part of the UM-SCC cell line panel — one of the most extensively characterized and widely distributed HNSCC cell line collections in the world — UM-SCC-129 provides a defined in vitro model for head and neck squamous cell carcinoma research. The UM-SCC series was developed over 40+ years from over 100 patient donors at the University of Michigan and is distinguished by well-documented STR profiles, TP53 mutation status, and radiation sensitivity data across the collection.
UM-SCC-129 is applicable in HNSCC biology research, radiation sensitivity studies, chemotherapy sensitivity testing (cisplatin, 5-FU, cetuximab), EGFR pathway analysis, TP53 functional studies, and evaluation of novel targeted agents. The UM-SCC panel culture is well-established in DMEM with 10% FBS and 1% NEAA, matching standard UM-SCC culture conditions across the collection. As with all UM-SCC lines, STR authentication and TP53 mutation status confirmation are recommended prior to experiments.

Tissue	Head and neck
Disease	Head and neck squamous cell carcinoma (HNSCC)
Metastatic site	Primary tumor site (head and neck)

Applications

HNSCC research; radiation sensitivity; cisplatin/5-FU/cetuximab sensitivity; EGFR pathway analysis; TP53 functional studies; targeted therapy evaluation

CLASSIFICATION

Organism	Human
Sex	Unspecified
Growth properties	Adherent
GMO status	Non-GMO

GMO status details

No genetic modification; wildtype HNSCC cell line

Biosafety level	1

CHARACTERISTICS

Morphology	Epithelial-like
Cell type	Epithelial cells
Doubling time	approx. 24 to 48 hours

IDENTIFIERS

Citation

UM-SCC-129 (Cytion catalog number 305727)

NCBI TaxID	9606

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Banking information
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Cellosaurus	Not assigned

HANDLING AND CULTURE

Culture medium

DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% FBS and 1% NEAA

Dissociation reagent	Accutase

Subculturing

Remove medium, wash with PBS without calcium and magnesium, cover with Accutase, incubate 8–10 min at RT, resuspend in medium, centrifuge 300×g 3 min, discard supernatant, reseed in fresh medium.

Split ratio	1 to 5
Seeding density	1 to 3 × 10^4 cells/cm^2
Fluid renewal	Every 2 to 3 days

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
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.
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.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
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.
Centrifuge the mixture at 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.
Follow the procedure described under Post-Thaw Recovery

QUALITY CONTROL AND CRYOPRESERVATION

Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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.

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.

DONOR

Donor age	Age unspecified
Ethnicity	Ethnicity unspecified

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Material Transfer Agreement required	Yes

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