UM-SCC-112

305720

GENERAL INFORMATION

Description

UM-SCC-112 is a human head and neck squamous cell carcinoma (HNSCC) cell line established at the University of Michigan Head and Neck Oncology laboratory as part of the UM-SCC panel. The UM-SCC series represents one of the most extensively characterized and widely distributed HNSCC cell line collections in the world, derived from patients with oral cavity, laryngeal, hypopharyngeal, and oropharyngeal squamous cell carcinomas treated at the University of Michigan Medical Center. UM-SCC-112 grows as an adherent monolayer with epithelial-like morphology and is used as part of a multi-line panel for comprehensive preclinical characterization of HNSCC biology.
UM-SCC-112 is applicable in studies of HNSCC biology, drug sensitivity and resistance, radiation response, EGFR and other signalling pathway analyses, and comparative molecular characterization within the UM-SCC panel. The line is suitable for pharmacological assays, invasion and migration studies, and xenograft models in immunocompromised hosts. Site-specific and donor-specific details for UM-SCC-112 should be verified from the University of Michigan SPORE Tissue Core for the most current annotations.

Tissue	Head and neck, oral cavity
Disease	Head and neck squamous cell carcinoma (HNSCC)

Applications

HNSCC research; drug sensitivity and resistance; radiation response; EGFR signalling; UM-SCC panel studies; invasion and migration assays; xenograft models

CLASSIFICATION

Organism	Human
Sex	Unspecified
Growth properties	Adherent
Biosafety level	1

CHARACTERISTICS

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

IDENTIFIERS

Citation

UM-SCC-112 (Cytion catalog number 305720)

NCBI TaxID	9606

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)

Cytion GmbH
Nikola-Tesla-Str. 3
69124 Heidelberg
Tel: +49 (0)6221 405780
info@cytion.com
cytion.com

Registered office Heidelberg
VAT ID: DE283292917
Local court Mannheim - HRB 714394
CEO / Geschäftsführer: Jonathan Steubing

Banking information
Sparkasse Heidelberg
IBAN: DE35 6725 0020 0009 2076 86
BIC: SOLADES1HDB

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

Supplements

Supplement the medium with 10% FBS and 1% non-essential amino acids (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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