Product sheet

UM-SCC-112 Cells | 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.
Organism	Human
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

Characteristics

Age	Age unspecified
Gender	Sex unspecified
Ethnicity	Ethnicity unspecified
Morphology	Epithelial-like
Cell type	Epithelial cells
Growth properties	Adherent

Regulatory Data

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Citation	UM-SCC-112 (Cytion catalog number 305720)
Biosafety level	1
NCBI_TaxID	9606

Biomolecular Data

Handling

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)
Supplements	Supplement the medium with 10% FBS and 1% non-essential amino acids (NEAA)
Dissociation Reagent	Accutase
Doubling time	approx. 24 to 48 hours
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
Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium. 7. Follow the procedure described under Post-Thaw Recovery
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