Product sheet

UWO37 Cells | 300257

Renseignements généraux

Description	The UWO37 (HPV16) cell line is derived from the tumor cells of a male patient diagnosed with oral tongue cancer and exhibits expression of Human Papillomavirus type 16 (HPV16). This cell line is pivotal for investigations into the molecular mechanisms by which HPV16 contributes to the pathogenesis of head and neck squamous cell carcinoma (HNSCC). By providing a model system that retains the genetic and phenotypic characteristics of the original tumor, UWO37 enables a detailed exploration of viral oncogenesis, interactions between viral proteins and host cell pathways, and the cellular responses to HPV16 integration. Research utilizing the UWO37 cell line focuses on unraveling the complex interplay between HPV16 and cellular machinery, identifying how viral oncogenes such as E6 and E7 contribute to cell transformation and malignancy. This model is also crucial for screening potential pharmacological agents and for developing gene therapy approaches aimed at targeting specific pathways altered by HPV16. Furthermore, the UWO37 cell line serves as a valuable tool for studying the efficacy and safety of new immunotherapeutic strategies, which could lead to enhanced treatment and prevention of HPV-related cancers.
Organism	Human
Tissue	Oral cavity; tonsil
Disease	Squamous cell carcinoma of the oropharynx
Applications	Generating Cisplatin Resistant HPV-positive HNSCC cell lines to study cisplatin resistance in HPV-positive cells
Synonyms	University of Western Ontario 37

Caractéristiques

Age	64 years
Gender	Male
Growth properties	Adherent

Données réglementaires

Citation	UWO37 (Cytion catalog number 300257)
Biosafety level	2
NCBI_TaxID	9606

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CellosaurusAccession	CVCL_B7MH

Données biomoléculaires

Viruses	Transformant: Human papillomavirus type 16 (HPV16); weak expression of HPV16 E7

Manipulation

Culture Medium	DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)
Supplements	Supplement the medium with 10% FBS
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.
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.

Contrôle de la qualité et analyse moléculaire

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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.