Product sheet

UWO23 Cells | 300258

Renseignements généraux

Description	The UWO23 (HPV33) cell line is derived from the tumor cells of a male patient with oral tongue cancer and is particularly notable for its expression of Human Papillomavirus type 33 (HPV33). This specific feature of UWO23 makes it a critical resource for research into the oncogenic roles of HPV in head and neck squamous cell carcinoma (HNSCC). The presence of HPV33 in these cells provides a unique opportunity to explore how this virus influences the carcinogenesis process, particularly in the context of oral and oropharyngeal regions. Research utilizing the UWO23 cell line focuses on uncovering the molecular and genetic interactions driven by HPV33 that lead to the development and progression of cancer. This includes studying alterations in cell cycle regulation, apoptosis resistance, and changes in cellular adhesion and motility, all of which are crucial for understanding tumor behavior and metastasis. Additionally, the UWO23 cell line is instrumental in the evaluation of new pharmacological treatments and potential diagnostic biomarkers for HPV-related cancers. By elucidating the pathways through which HPV33 contributes to malignancy, researchers can develop targeted therapies that might improve therapeutic outcomes for patients suffering from HPV-associated head and neck cancers.
Organism	Human
Tissue	Oral cavity; tongue
Disease	Squamous cell carcinoma of the oral tongue
Applications	Generating Cisplatin Resistant HPV-positive HNSCC cell lines to study cisplatin resistance in HPV-positive cells
Synonyms	University of Western Ontario 23

Caractéristiques

Age	52 years
Gender	Male
Growth properties	Adherent

Données réglementaires

Citation	UWO23 (Cytion catalog number 300258)
Biosafety level	2

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NCBI_TaxID	9606
CellosaurusAccession	CVCL_B7MF

Données biomoléculaires

Viruses	Transformant: Human papillomavirus type 33 (HPV33)

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

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.