Product sheet

CERV-186 Cells | 300290

General information

Description	The CERV-186 cell line, derived in-vitro from the xenotransplant cervix carcinoma MRI-H-186, represents a model of invasive, large cell, non-keratinizing squamous cell carcinoma. This establishment and adaptation to in vivo transplantation were facilitated by Dr. Bodgen at the Mason Research Institute. MRI-H186 cells are characterized by their genomic composition, harboring approximately 26 integrated copies of both full-length and truncated HPV16 genomes, which is reflected in their transcriptomic profile. These cells display a pronounced expression of both full-length and truncated early HPV16 transcripts, with a particularly high expression level of E5 full-length (fl) RNA. This expression profile markedly differs from that observed in the CaSki and MRI-H196 cell lines. Moreover, the transcriptional activity in MRI-H186 cells, in terms of the expression of various other transcripts, aligns closely with that seen in the HPK-IA and C3 cell lines, suggesting a shared pattern of transcriptional behavior. The presence of both full-length and truncated HPV16 genomic integrations in MRI-H186 cells underlies their vigorous expression of early viral transcripts, underscored by the significant expression of E5 fl RNA. This indicates the transcription of full-length early RNAs, culminating at the early polyadenylation signal, and highlights the unique transcriptional dynamics within the MRI-H186 cell line.
Organism	Human
Tissue	Cervix
Disease	Squamous cell carcinoma
Synonyms	Cerv-186, MRI-H-186, MRI-H186

Characteristics

Age	42 years
Gender	Female
Ethnicity	African
Morphology	Epithelial-like
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	CERV-186 (Cytion catalog number 300290)
Biosafety level	2

Expression / Mutation

Tumorigenic	Yes, in nude mice
Viruses	HPV-16 positive
Products	Cytokeratine 8, 18, Vimentin, Desmoplakin

Handling

Culture Medium	DMEM:Ham's F12, w: 3.1 g/L Glucose, w: 1.6 mM L-Glutamine, w: 15 mM HEPES, w: 1.0 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	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.
Split ratio	A ratio of 1:2 to 1:6 is recommended
Seeding density	2 x 10^4 cells/cm^2 will result in a confluent monolayer within 7 days
Fluid renewal	2 to 3 times per week
Freezing recovery	After thawing, plate the cells at 5 x 10^4 cells/cm^2 and allow the cells to recover from the freezing process and to adhere for at least 24 hours.
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)

Handling of cryopreserved cultures

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. Optionally, skip centrifugation but remove any remaining freezing medium after 24 hours.
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.

Quality control / Genetic profile / HLA

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.

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STR profile	**Amelogenin**: x,x **CSF1PO**: 9,11 **D13S317**: 12 **D16S539**: 13 **D5S818**: 11,12 **D7S820**: 8,12 **TH01**: 6 **TPOX**: 8,11 **vWA**: 14,17 **D3S1358**: 15,18 **D21S11**: 29,30 **D18S51**: 16 **Penta E**: 5,7 **Penta D**: 10,12 **D8S1179**: 14 **FGA**: 19,20
HLA alleles	**A***: 30:01:01 **B***: 13:02:01 **C***: 06:02:01 **DRB1***: 07:01:01 **DQA1***: 02:01:01 **DQB1***: 02:02:01 **DPB1***: 03:01:01 **E**: 01:01:01