Product sheet

ME-180 Cells | 300196

General information

Description	The ME-180 cell line, characterized by its epithelial morphology, is derived from the uterine cervix of a 66-year-old Caucasian female with epidermoid carcinoma. ME-180 cells present a complex karyotype, ranging from hyperdiploid to hypohexaploid, featuring notable chromosomal abnormalities such as dicentrics, fragmentation, and various markers, reflecting its genetic instability. ME180 cells are tumorigenic, capable of forming well-differentiated epidermoid carcinoma (grade I) in nude mice, indicative of its origin from a highly invasive squamous cell carcinoma lacking significant keratinization. ME-180 cells are particularly valuable in cancer and infectious disease research, including studies on sexually transmitted diseases. A distinctive aspect of ME-180 is its response to tumor necrosis factor alpha (TNF alpha), which inhibits cell growth, offering insights into the cell line's interaction with cytokines and potential therapeutic targets. Additionally, these cells harbor human papillomavirus (HPV) DNA, showing closer homology to HPV-68 than to HPV-18, which adds a layer of relevance to studies on viral oncogenesis and the development of antiviral strategies.
Organism	Human
Tissue	Uterus, Cervix
Disease	Epidermoid Carcinoma
Metastatic site	Omentum
Synonyms	Me-180, ME 180, ME180

Characteristics

Age	66 years
Gender	Female
Ethnicity	Caucasian
Morphology	Epithelial-like
Cell type	Epithelial
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	ME-180 (Cytion catalog number 300196)
Biosafety level	1

Expression / Mutation

Viruses	HPV positive

Handling

Culture Medium	McCoys 5a, w: 3.0 g/L Glucose, w: stable Glutamine, w: 2.0 mM Sodium pyruvate, w: 2.2 g/L NaHCO3 (Cytion article number 820200a)
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.
Seeding density	1 x 10^4 cells/cm^2
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.

ME-180 Cells | 300196

STR profile

Amelogenin: x,x
CSF1PO: 11,11
D13S317: 11,13
D16S539: 12,13
D5S818: 12,12
D7S820: 9,10
TH01: 8,9.3
TPOX: 8,10
vWA: 15,17
D3S1358: 16,16
D21S11: 30,31
D18S51: 12,12
Penta E: 12,14
Penta D: 9,14
D8S1179: 14,14
FGA: 23,23