Product sheet

EMT6 Cells | 305159

General information

Description	The EMT6 cell line is a murine mammary adenocarcinoma line that is extensively used in cancer research, particularly in studies related to breast cancer. Originating from a spontaneous tumor in a BALB/c mouse, EMT6 cells are employed both in vitro and in vivo to analyze tumorigenesis, metastasis, and chemotherapeutic resistance. The cells are characterized by their ability to form tumors rapidly when transplanted into immunocompetent mice, making them an ideal model for studying tumor immunity and the efficacy of anti-cancer therapies. EMT6 cells are highly adaptable to various growth conditions and have a relatively high mitotic index, which facilitates easy cultivation and experimental manipulation in laboratory settings. They are also used in radiobiology studies due to their pronounced sensitivity to radiation, providing insights into the cellular mechanisms underlying radiation therapy for cancer. The cell line has been instrumental in the development of protocols for hypoxic cell sensitizers and has been used to test the efficacy of photodynamic therapy agents.
Organism	Mouse
Tissue	Breast
Disease	Malignant neoplasms of the mouse mammary gland
Synonyms	EMT-6, Experimental Mammary Tumour-6

Characteristics

Gender	Female
Morphology	Epithelial
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	EMT6 (Cytion catalog number 305159)
Biosafety level	1

Expression / Mutation

Handling

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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	1:2 to 1:5
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100)

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.
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.