Product sheet

K7M2 wt Cells | 305188

General information

Description	The K7M2 wt cell line is derived from a murine osteosarcoma and is frequently utilized in cancer research, particularly for studies investigating the pathogenesis and therapeutic response of osteosarcoma. This cell line is characterized by its high metastatic potential, making it an invaluable model for studying the mechanisms underlying cancer metastasis and for testing anti-metastatic agents. K7M2 wt cells display a typical epithelial morphology and exhibit robust growth in vitro, which facilitates various experimental applications including gene expression studies, drug screening, and genetic manipulation. Researchers leverage the K7M2 wt cell line to explore the molecular and cellular processes involved in osteosarcoma progression. Studies often focus on signaling pathways, such as the Wnt/β-catenin and PI3K/AKT pathways, which are crucial in tumor growth and metastasis. The genetic profile of K7M2 wt cells includes alterations common in osteosarcoma, providing insights into the genetic drivers of this malignancy. Furthermore, this cell line is instrumental in preclinical testing of new therapeutic approaches, including targeted therapies and immunotherapies, offering a platform for translating research findings into potential clinical applications.
Organism	Mouse
Tissue	Ascites
Disease	Mouse osteosarcoma
Metastatic site	Lung
Synonyms	K7M2-WT, K7M2

Characteristics

Age	895 days old
Gender	Female
Cell type	Osteoblast
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	K7M2 wt (Cytion catalog number 305188)

K7M2 wt Cells | 305188

Biosafety level	1

Expression / Mutation

Receptors expressed	Complement(C3), expressed, Fc receptor, IgG, high affinity I(Fcgr1), expressed
Tumorigenic	Yes

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
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 1:4
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.