K7M2 wt

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.

Tissue	Ascites
Disease	Mouse osteosarcoma
Metastatic site	Lung

Applications

Osteosarcoma research; syngeneic BALB/c tumor model; metastasis modeling; Wnt/β-catenin and PI3K/AKT pathway studies; anti-tumor drug evaluation; immunotherapy testing; complement and Fc receptor biology

Synonyms

- K7M2-WT
- K7M2

CLASSIFICATION

Organism	Mouse
Sex	Female
Growth properties	Adherent
GMO status	Non-GMO

GMO status details

No genetic modification; wildtype murine osteosarcoma cell line derived from BALB/c mice

Biosafety level	1

CHARACTERISTICS

Cell type	Osteoblast
Tumourigenic	Yes

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IDENTIFIERS

Citation

K7M2 wt (Cytion catalog number 305188)

NCBI TaxID	10090
Cellosaurus	CVCL_V455

EXPRESSION AND SUSCEPTIBILITY

Receptors expressed

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

HANDLING AND CULTURE

Culture medium

DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

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.

Fluid renewal	2 to 3 times per week

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
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.
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.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
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.
Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
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.
Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

QUALITY CONTROL AND CRYOPRESERVATION

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.

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.

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.

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.

DONOR

Breed / subspecies	BALB/c
Donor age	895 days

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Material Transfer Agreement required	Yes