

## Meth A sarcoma Cells | 400284

### General information

#### Description

Meth A sarcoma cells, originating from a chemically induced tumor in Balb/c mice, provide a crucial model for understanding tumor biology and the molecular mechanisms driving sarcoma development. A key aspect of Meth A sarcoma cell research involves the study of the transformation-related protein p53, known for its role in tumor suppression. Typically, p53 is highly labile, but its stability is markedly increased in many fibrosarcoma cell lines derived from tumors induced by physical or chemical agents. This stabilization often correlates with the formation of a stable complex with the heat shock protein cognate hsc70.

Interestingly, Meth A sarcoma cells exhibit unique behavior regarding p53 stability. Despite p53 being very stable in these cells, there is no detectable interaction with hsc70. This suggests that the inability to form such a complex is likely due to the primary structure of the endogenous p53. When other p53 variants are introduced into Meth A sarcoma cells, a p53-hsc70 complex does form, indicating that the primary structure of p53 is a critical determinant of its interaction with hsc70 and, consequently, its stability.

Further investigations using stable transfection experiments have revealed that different p53 variants are degraded at distinct rates in various transformed cell types, emphasizing the role of p53's primary structure in determining its turnover rate. Additionally, the cellular environment also influences p53 stability, as evidenced by differing degradation rates of at least one p53 variant in nontransformed BALB/c-3T3 cells compared to transformed fibrosarcoma cells. This highlights the complex interplay between genetic factors and cellular context in regulating p53 stability and function in Meth A sarcoma cells.

#### Organism

Mouse

#### Tissue

Skin

#### Disease

Fibrosarcoma

#### Synonyms

Meth A, Meth-A, Meth-A-sarkom

### Characteristics

#### Breed/Subspecies

BALB/c

#### Age

Adult

#### Gender

Female

#### Morphology

Round cells

#### Growth properties

Suspension

**Meth A sarcoma Cells | 400284****Regulatory Data**

<b>Citation</b>	Meth A sarcoma (Cytion catalog number 400284)
<b>Biosafety level</b>	1
<b>NCBI_TaxID</b>	10090
<b>CellosaurusAccession</b>	CVCL_5798

**Biomolecular Data**

<b>Tumorigenic</b>	Yes
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**Handling**

<b>Culture Medium</b>	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO <sub>3</sub> (Cytion article number 820700a)
<b>Supplements</b>	Supplement the medium with 10% FBS
<b>Doubling time</b>	28 to 30 hours
<b>Subculturing</b>	Allow cell aggregates to settle to the bottom of the flask, discard the supernatant medium, disperse the cells with gentle pipetting and dispense into new flasks. Resuspend cell suspension in the flask and take representative aliquot to count the cell number per ml. Dilute cell suspension to $1 \times 10^5$ cells/ml with fresh medium and transfer into new flasks.
<b>Seeding density</b>	Start new cultures using 2 to $3 \times 10^6$ cells/ml. Once the cells have recovered from the freezing and thawing process after 1 to 2 passages, adjust the cell density to $1 \times 10^6$ cells/ml when splitting the cells.
<b>Fluid renewal</b>	2 to 3 times per week
<b>Post-Thaw Recovery</b>	About 53% of the initial cell number was collected after freezing.
<b>Freeze medium</b>	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.

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### Thawing and Culturing Cells

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  $-150^{\circ}\text{C}$  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  $37^{\circ}\text{C}$  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  $300 \times g$  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.

### Incubation Atmosphere

$37^{\circ}\text{C}$ , 5%  $\text{CO}_2$ , humidified atmosphere.

### Shipping Conditions

Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately  $-78^{\circ}\text{C}$  throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.

### Storage Conditions

For long-term preservation, place vials in vapor-phase liquid nitrogen at about  $-150$  to  $-196^{\circ}\text{C}$ . Storage at  $-80^{\circ}\text{C}$  is acceptable only as a short interim step before transfer to liquid nitrogen.

## Quality Control & Molecular Analysis

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**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.