

CaD2 Cells | 400138

### General information

**Description** CaD2 cells, originating from the murine breed C3H, represent a cancer cell line derived from a mouse mammary gland carcinoma. Specifically, they were isolated from a six-month-old female mouse, closely mirroring the biological context of mammary gland malignancies in mice. CaD2 cells offer a valuable platform for the study of malignant neoplasms due to their distinct attributes. Their epithelial-like morphology and adherent growth properties ensures the reliability and meaningfulness of experimental results. This robust characterization, combined with the availability of essential growth conditions, such as DMEM with 10% FBS, makes CaD2 a valuable resource in cancer research. Researchers often maintain these cells at a recommended ratio of 1:3, with a seeding density of  $5 \times 10^4$  cells/cm<sup>2</sup> to achieve a confluent monolayer within two days, allowing for regular experimentation, typically conducted 2 to 3 times per week. The cells have been tested and confirmed to be negative for several viruses and microorganisms, including Sendai virus, Ektromelie virus, Polyoma virus, K-Virus, Kilham virus, Reo 3 virus, PVM (Pneumonia Virus of Mice), LCM (Lymphocytic Choriomeningitis) virus, M.pulmonis (Mycoplasma pulmonis), MVM (Minute Virus of Mice), Theiler's GD VII virus, Toolan's H-1 virus, MHV (Mouse Hepatitis Virus), LDV (Lactate Dehydrogenase-elevating Virus), RCV/SDA (Rat Coronavirus/Sialodacryoadenitis Virus), M-Adenovirus, and B. piliformis. This comprehensive testing ensures that CaD2 cells can be used with confidence in various research settings without concerns related to these potential contaminants.

<b>Organism</b>	Mouse
<b>Tissue</b>	Breast, mammary gland
<b>Disease</b>	Carcinoma

### Characteristics

<b>Age</b>	6 months
<b>Gender</b>	Female
<b>Morphology</b>	Epithelial-like
<b>Growth properties</b>	Adherent

### Identifiers / Biosafety / Citation

<b>Citation</b>	CaD2 (Cytion catalog number 400138)
<b>Biosafety level</b>	1

### Expression / Mutation

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**Viruses** MAP-test negative: Sendai, Ektromelie, Polyoma, K-Virus, Kilham, Reo 3, PVM, LCM, M.pulmonis, MVM, Theiler's GD VII, Toolan's H-1, MHV, LDV, RCV/SDA, M-Adenovirus, B.piliformis.

## Handling

**Culture Medium** DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO<sub>3</sub>, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)

**Medium supplements** Supplement the medium with 10% FBS

**Passaging solution** Accutase

**Subculturing** Remove medium and rinse the adherent cells using PBS without calcium and magnesium (3-5 ml PBS for T25, 5-10 ml for T75 cell culture flasks). Add Accutase (1-2 ml per T25, 2.5 ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at ambient temperature for 8-10 minutes. Carefully resuspend the cells with medium (10 ml), centrifuge for 3 min at 300 g, resuspend cells in fresh medium and dispense into new flasks which contain fresh medium.

**Split ratio** A ratio of 1:3 is recommended

**Seeding density**  $5 \times 10^4$  cells/cm<sup>2</sup> will result in a confluent monolayer within 2 days.

**Fluid renewal** 2 to 3 times per week

**Freezing recovery** After thawing, plate the cells at  $5 \times 10^4$  cells/cm<sup>2</sup> 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** CaD2 cells are shipped in a deep-frozen state on dry ice. Upon receipt, confirm that the vial remains frozen. For storage, place the cryovial immediately at temperatures below -150 degrees. If you plan to culture the cells immediately, swiftly thaw the vial by shaking it in a 37 degrees water bath with clean water and an antimicrobial agent for 40-60 seconds. Remove the vial once a small ice clump persists, ensuring it remains cold. Proceed with all subsequent steps under aseptic conditions. In a sterile flow hood, disinfect the cryovial with 70% ethanol. Then, gently open the vial and transfer the cell suspension into a 15 ml centrifuge tube pre-filled with 8 ml of room temperature culture medium. Gently mix the cells. For cell separation, centrifuge at 300 x g for 3 minutes and dispose of the supernatant. Skipping centrifugation is optional, although any residual freezing medium should be removed after 24 hours. Resuspend the pellet gently in 10 ml of fresh culture medium and divide between two T25 culture flasks. Follow the subculture protocol for subsequent steps.

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#### **Handling of proliferating cultures**

One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in a 50 ml centrifuge tube. Spin down the collected medium at 300 x g for 3 minutes to collect the cells which may have detached during transit. If a cell pellet is visible, resuspend the cells in 5 ml of cell culture medium and transfer to a T25 cell culture flask. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Examine cell morphology and confluency using a microscope. Finally, incubate the flasks at 37 degrees Celsius for at least 24 hours.

#### **Quality control / Genetic profile / HLA**

#### **Sterility**

Mycoplasma contamination is rigorously 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.