

**CLS-ACI-1 Cells | 500459****General information**

**Description** The solid Mammary carcinoma was induced by oral administration of 20 mg DMBA (7,12-dimethylbenzo[a]anthracene) per Kg weight. In 1998, the continuous cell line CLS-ACI-1 was established as in vitro culture from the solid tumor tissue by CLS Cell Lines Service.

**Organism** Rat

**Tissue** Breast

**Disease** Adenocarcinoma

**Synonyms** CLS-ACI-I

**Characteristics**

**Age** 3 months

**Gender** Female

**Morphology** Epithelial-like

**Growth properties** Adherent/suspension

**Identifiers / Biosafety / Citation**

**Citation** CLS-ACI-1 (Cyton catalog number 500459)

**Biosafety level** 1

**Expression / Mutation**

**Oncogenes** Overexpression of Mycn gene.

**Tumorigenic** Yes, in nude mice, ACI-rat

**Karyotype** Near triploid. 88.4% showing 51-69 chromosomes, 5% 38-50 chromosomes, 6.6% near tetraploid or higher ploidy level.

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## Handling

<b>Culture Medium</b>	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 NaHCO <sub>3</sub> (Cytion article number 820400a)
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<b>Medium supplements</b>	Supplement the medium with 10% FBS
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<b>Passaging solution</b>	Accutase
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<b>Subculturing</b>	Gather the suspension cells in a 15 ml tube and gently wash the adherent cells with PBS lacking calcium and magnesium (use 3-5 ml for T25 flasks and 5-10 ml for T75 flasks). Apply Accutase (1-2 ml for T25 flasks, 2.5 ml for T75 flasks) ensuring full coverage of the cell layer. Allow the cells to incubate at room temperature for 10 minutes. Following incubation, combine and centrifuge both the suspension and adherent cells. After centrifugation, carefully resuspend the cell pellet and transfer the cell suspension into new flasks containing fresh medium.
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<b>Split ratio</b>	A ratio of 1:3 to 1:5 is recommended
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<b>Seeding density</b>	$2 \times 10^4$ cells/cm <sup>2</sup> will yield in a confluent layer in about 6 to 7 days
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<b>Fluid renewal</b>	Every 3 to 5 days
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<b>Freezing recovery</b>	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.
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<b>Freeze medium</b>	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
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#### 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. Optionally, skip centrifugation but remove any remaining freezing medium after 24 hours.
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.

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#### STR profile

**Rat\_D1Wox31:** 100  
**Rat\_D2Wox37:** 156  
**Rat\_D19Wox11:** 228  
**Rat\_D10Wox8:** 266,270  
**Rat\_D4Wox7:** 141,145  
**Rat\_D2Wox27:** 223  
**Rat\_D5Rat33:** 116,120,122  
**Rat\_D10Wox11:** 156,159  
**Rat\_D1Wox23:** 226,230  
**Rat\_D12Wox1:** 410  
**Rat\_D6Wox2:** 100,112,120  
**Rat\_D8Wox7:** 161,182  
**Rat\_D6Cebr1:** 239,241  
**SRY:** x,x