

MX-1 Cells | 300296

General information

Description	The Mx-1 cell line has been established as in vitro culture from the Mx-1 tumor xenograft model of breast carcinoma tissue.
Organism	Human
Tissue	Breast
Disease	Adenocarcinoma, Infiltrating duct carcinoma (IDC)
Synonyms	Mx1, Mxl

Characteristics

Age	29 years
Gender	Female
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	Mx-1 (Cytion catalog number 300296)
Biosafety level	1

Expression / Mutation

Receptors expressed	Estrogen (oestrogen) receptor (-)
Protein expression	p53 (-)
Tumorigenic	Yes, in nude mice

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Handling

Culture Medium	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 ₃ (Cytion article number 820400a)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	Accutase
Doubling time	30 to 35 hours
Subculturing	Remove medium and rinse the adherent cells using PBS without calcium and magnesium (3-5 ml PBS for T25, 5-10ml for T75 cell culture flasks). Add TrypleExpress (1-2ml per T25, 2.5ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at 37 degree Celsius for 10 minutes. Carefully resuspend the cells, the addition of medium is optional but not necessary, and dispense into new flasks which contain fresh medium. Do not allow the cells to become confluent, subculture once per week. Note: The cells do not form a confluent monolayer. Subculture when a dense layer of cells is observed macroscopically.
Split ratio	A ratio of 1:2 to 1:3 is recommended
Seeding density	2 x 10 ⁴ cells/cm ²
Fluid renewal	2 to 3 times per week
Freezing recovery	Fast
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
Handling of cryopreserved cultures	Mx-1 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.

STR profile

Amelogenin: x,x
CSF1PO: 11
D13S317: 11,12
D16S539: 12
D5S818: 12
D7S820: 11,12
TH01: 7,9
TPOX: 7,8
vWA: 17,18
D3S1358: 15
D21S11: 29,30,31,32
D18S51: 12,16
D8S1179: 11,12,13
FGA: 20
D2S1338: 19
D19S433: 13,15.2,16.2

HLA alleles

A*: 11:01:01
B*: 35:01:01
C*: 04:01:01
DRB1*: 01:03:01
DQA1*: 01:01:01
DQB1*: 05:01:01
DPB1*: 04:01:01
E: 01:01:01