Product sheet

BALB/3T3 clone A31 | 305155

General information

Description	S.A. Aaronson and G.T. Todaro created the BALB/3T3 clone A31 cell line in 1968 from disaggregated 14- to 17-day-old BALB/c mouse embryos. Some evidence suggests that these cells are multipotential mesenchymal cells that can differentiate into different tissues in response to different microenvironmental influences or culture conditions. Mouse embryo cells grown in culture are likely to become permanent cell lines. Repeatedly transferred before confluence to minimize cell-cell contact, the emerging lines are susceptible to contact inhibition of cell division, grow at a high dilution, and exhibit a low saturation density. These cells have a karyotype with a modal number of 78 and a range of 62 to 109. The majority of the cells only had telocentric or acrocentric chromosomes. Some cell lines have been reported to have cytogenetic instability in the literature. Although the BALB/3T3 clone A31 cells are not tumorigenic, they exhibit tumorigenic properties in a semisolid medium. In tissue culture, these cells are highly susceptible to transformation by the oncogenic DNA virus SV40 and the murine sarcoma virus. They were also tested for ectromelia virus and found negative (mousepox).
Organism	Mouse
Tissue	Embryo
Synonyms	BALB/c 3T3 clone A31, Balb/c3T3, BALB/c 3T3, Balb/c 3T3, BALB/3T3, Balb/3T3-4-Cl31, 3T3 clone A31, BALB/3T3 cl. A31, BALB 3T3 clone A31, BALB/3T3 (clone A31), B/C3T3, 3T3-A31, 3T3(A31), A31, A31N

Characteristics

Age	Embryo, 14 to 17 days gestation
Morphology	Fibroblast
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	BALB/3T3 clone A31 (Cytion catalog number 305155)
Biosafety level	2

Expression / Mutation

Tumorigenic	No, the cells were not tumorigenic in immunosuppressed mice, but did form colonies in semisolid medium.

Handling

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Culture Medium	DMEM
Medium supplements	10% FBS, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: 1.0 mM Sodium pyruvate
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	1:2 to 1:4
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
Handling of cryopreserved cultures	The cells come deep-frozen shipped on dry ice. Please make sure that the vial is still frozen. If immediate culturing is not intended, the cryovial must be stored below -150 degree Celsius after arrival. If immediate culturing is intended, please follow the below instructions: Quickly thaw by rapid agitation in a 37 degree Celsius water bath within 40-60 seconds. The water bath should have clean water containing an antimicrobial agent. As soon as the sample has thawed, remove the cryovial from the water bath. A small ice clump should still remain and the vial should still be cold. From now on, all operations should be carried out under aseptic conditions. Transfer the cryovial to a sterile flow cabinet and wipe with 70% alcohol. Carefully open the vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of culture medium (room temperature). Resuspend the cells carefully. Centrifuge at 300 x g for 3 min and discard the supernatant. The centrifugation step may be omitted, but in this case the remains of the freeze medium have to be removed 24 hours later. Resuspend the cells carefully in 10 ml fresh cell culture medium and transfer them into two T25 cell culture flasks. All further steps are described in the subculture section.
Handling of proliferating cultures	One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in 1 or 2 x 50 ml centrifuge tubes, respectively. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Control the cell morphology and confluency under the microscope. Incubate at 37 degree Celsius for a minimum of 24 hours. 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. Incubate at 37 degree Celsius for a minimum of 24 hours.

Quality control / Genetic profile / HLA

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Sterility	Mycoplasma contaminations are ruled out through PCR-based and luminescence-based mycoplasma assays. The absence of bacterial, fungal or yeast contamination is controlled through daily visual cell monitoring.
STR profile	**M_18-3**: 18 **M_4-2**: 21.3 **M_6-7**: 12 **M_3-2**: 14 **M_19-2**: 14 **M_7-1**: 25.2 **M_1-1**: 16 **M_Sex**: x **M_8-1**: 13 **M_2-1**: 11,16 **M_15-3**: 22.3 **M_6-4**: 18 **M_11-2**: 17 **M_1-2**: 17 **M_17-2**: 15,16 **M_12-1**: 16 **M_5-5**: 14 **M_X-1**: 25 **M_13-1**: 15.2,16.2 **Human D4/D8**: -