

IMR-32 growing culture | 330148

General information

Description	The IMR-32 cell culture shows two cell types, a small neuroblast- like cell is predominant, the other one is a large hyaline fibroblast.
Organism	Human
Tissue	Brain
Disease	Neuroblastoma
Metastatic site	Abdomen
Synonyms	IMR 32, IMR32, Institute for Medical Research-32, GM03320, GM3320C, GM03320D, AG03320, AG3320

Characteristics

Age	13 months
Gender	Male
Ethnicity	Caucasian
Morphology	Fibroblast-like
Cell type	Neuroblast
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	IMR-32 (Cytion catalog number 300148)
Biosafety level	1

Expression / Mutation

Isoenzymes	G6PD, B
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Virus susceptibility Vesicular stomatitis (Indiana), herpes simplex, vaccinia, coxsackievirus B3, poliovirus 3 (poorly)

Virus resistance Echovirus 11

Reverse transcriptase Negative

Handling

Culture Medium EMEM, w: 2 mM L-Glutamine, w: 1.5 g/L NaHCO₃, w: EBSS, w: 1 mM Sodium pyruvate, w: NEAA (Cytion article number 820100c)

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, 5-10ml for T75 cell culture flasks). Add Accutase (1-2ml per T25, 2.5ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at ambient temperature for 10 minutes. Carefully resuspend the cells with medium (10 ml), centrifuge for 3 min at 300xg, resuspend cells in fresh medium and dispense into new flasks which contain fresh medium. Attention: The cells can detach during the washing step with PBS. Therefore apply PBS carefully to the flask (not directly to the cells).

Split ratio A ratio of 1:3 to 1:6 is recommended

Seeding density 1 x 10⁴ cells/cm²

Fluid renewal Every 3 to 5 days

Freezing recovery After thawing, plate the cells at 5 x 10⁴ cells/cm² 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)

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Handling of cryopreserved cultures

IMR-32 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.

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,Y
CSF1PO: 11,12
D13S317: 9
D16S539: 8
D5S818: 11,12
D7S820: 9,1
TH01: 7,9,3
TPOX: 11
vWA: 15
D3S1358: 16
D21S11: 30,31
D18S51: 12,15
Penta E: 7,15
Penta D: 11,12
D8S1179: 13
FGA: 21,24
D1S1656: 17,17.3
D6S1043: 14,18
D2S1338: 23,24
D12S391: 19,3,23
D19S433: 14,15

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HLA alleles

A*: 02:01:01, 24:02:01

B*: 07:02:01, 15:01:01

C*: 03:03:01, 07:02:01

DRB1*: 07:01:01, 13:01:01

DQA1*: 01:03:01, 02:01:01

DQB1*: 03:03:02, 06:03:01

DPB1*: 02:01:02, 04:01:01

E: 01:01, 01:03