Product sheet

A3 Cells | 305143

General information

Description	A3 cells are human T lymphoblasts derived from the Jurkat cell line obtained from the laboratory of Gerald Crabtree at Stanford University. These cells possess a lymphoblast morphology, grow in suspension and are highly relevant in studying acute T cell leukaemia, 3D cell culture applications, immune system disorder research, and immunology. These cells are derived from the Jurkat cell line, which was treated with Fas Antibody to obtain a low spontaneous resistance rate to Fas-mediated apoptosis. This characteristic makes A3 cells highly valuable for investigating immune system dysregulation and identifying potential therapeutic targets.
Organism	Human
Tissue	Peripheral blood
Disease	Childhood T acute lymphoblastic leukemia

Characteristics

Morphology	Lymphoblast
Growth properties	Suspension

Identifiers / Biosafety / Citation

Citation	A3 (Cytion catalog number 305143)
Biosafety level	1

Expression / Mutation

Handling

Culture Medium	RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Medium supplements	Supplement the medium with 10% FBS

A3 Cells | 305143

Subculturing	Gently homogenize the cell suspension in the flask by pipetting up and down, then take a representative sample to determine the cell density per ml. Dilute the suspension to achieve a cell concentration of 1 x 10^5 cells/ml with fresh culture medium, and aliquot the adjusted suspension into new flasks for further cultivation.
Split ratio	1:2 to 1:4
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100)
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. 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

A3 Cells | 305143

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.

STR profile

Amelogenin: x,x
CSF1PO: 11,12
D13S317: 8,11
D16S539: 11
D5S818: 9
D7S820: 8,1
TH01: 6,9.3
TPOX: 8,1
vWA: 17,18
D3S1358: 15,17
D21S11: 31.2,33.2
D18S51: 13,20,21
Penta E: 10,12
Penta D: 11
D8S1179: 12,14
FGA: 19,22
D6S1043: 11
D2S1338: 19,23
D12S391: 22,24
D19S433: 13,15.2