Product sheet

Kasumi-1 Cells | 300226

General information

Description	The Kasumi-1 cell line was derived from the peripheral blood of a 7-year-old Japanese boy with AML (FAB M2) in relapse after bone marrow transplantation. Kasumi-1 cells have the characteristics of myeloid and macrophage lineages. they differentiate into macrophage-like cells when cultured with TPA.
Organism	Human
Tissue	Blood
Disease	Acute myeloblastic leukemia
Synonyms	KASUMI-1, Kasumi 1, KASUMI1, Kasumi1

Characteristics

Age	7 years
Gender	Male
Ethnicity	Japanese
Morphology	Round cells showing marked variations in both size and nuclear cytoplasmic ratio.
Cell type	Myeloblast (AML-acute myeloid leukemia)
Growth properties	Suspension

Identifiers / Biosafety / Citation

Citation	Kasumi-1 (Cytion catalog number 300226)
Biosafety level	1

Expression / Mutation

Antigen expression	CD4+ (37.1%, coexpressed with CD34 and CD33), CD13+(OKM13), CD15+(LeuM1), CD33+, CD34+(MY10), CD38+(OKT10, 50.1%), CD71+(Nu-TERf), HLA-DR+(OKDR).
Karyotype	t(8,21) chromosome translocation

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
Doubling time	40 to 45 hours
Subculturing	Maintain cultures by periodically adding or replacing the medium. Initiate cultures with a density of 2 x 10^5 cells/ml and keep the cell concentration within the range of 1 x 10^5 to 1 x 10^6 cells/ml for optimal growth.
Split ratio	A ratio of about 1:2 to 1:3 every 3 to 4 days is recommended
Seeding density	1 x 10^5 cells/ml
Fluid renewal	Add fresh medium (20 to 30% by volume) every 2 to 3 days
Freezing recovery	About one week
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)

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	**Amelogenin**: x,x **CSF1PO**: 10,12 **D13S317**: 11,13 **D16S539**: 9,12 **D5S818**: 9,11 **D7S820**: 8,11 **TH01**: 6,9 **TPOX**: 8,9 **vWA**: 14 **D3S1358**: 15,17 **D21S11**: 30,31 **D18S51**: 15,16 **Penta E**: 11 **Penta D**: 12 **D8S1179**: 13,14 **FGA**: 22,24
HLA alleles	**A***: 26:01:01, 26:02:01 **B***: 40:06:01, 48:01:01 **C***: 03:03:01, 08:01:01 **DRB1***: 09:01:02, 14:54:01 **DQA1***: 01:04:01, 03:02:01 **DQB1***: 03:03:02, 05:03:01 **DPB1***: 02:01:02, 02:01:02 **E**: 01:03:01