

**KG-1 Cells | 300208****General information**

|                    |  |
|--------------------|--|
| <b>Description</b> | The KG-1 cell line was established from a bone marrow aspirate. They do not spontaneously differentiate to granulocyte and macrophage like cells, do not express DR and do not respond to colony stimulating factor (CSF). |
| <b>Organism</b>    | Human  |
| <b>Tissue</b>      | Bone marrow  |
| <b>Disease</b>     | Acute myelogenous leukemia   |
| <b>Synonyms</b>    | KG1  |

**Characteristics**

|                          |            |
|--------------------------|------------|
| <b>Age</b>               | 59 years   |
| <b>Gender</b>            | Male       |
| <b>Ethnicity</b>         | Caucasian  |
| <b>Cell type</b>         | Myeloblast |
| <b>Growth properties</b> | Suspension |

**Identifiers / Biosafety / Citation**

|                        |                                     |
|------------------------|-------------------------------------|
| <b>Citation</b>        | KG-1 (Cytion catalog number 300208) |
| <b>Biosafety level</b> | 1                                   |

**Expression / Mutation**

|                           |  |
|---------------------------|--|
| <b>Antigen expression</b> | HLA A30, A31, B35, Cw4   |
| <b>Isoenzymes</b>         | G6PD, B, PGM1, 1-2, PGM3, 0, ES-D, 1, Me-2, 1, AK-1, 0, GLO-1, 2 |
| <b>Viruses</b>            | EBNA (EBNA ): negative   |

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**Reverse transcriptase**      Negative

**Handling**

**Culture Medium**      IMDM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 25 mM HEPES, w: 1.0 mM Sodium pyruvate, w: 3.024 g/L NaHCO<sub>3</sub> (Cytion article number 820800a)

**Medium supplements**      Supplement the medium with 10% FBS

**Doubling time**      45 hours

**Subculturing**      Transfer the cell suspension into sterile centrifuge tubes. Collect the cells by spinning down at 300xg for 3 minutes. Discard the supernatant and resuspend the pelleted cells in fresh cell culture medium. Adjust to an optimal cell density between 1 - 3 x 10<sup>5</sup> cells/ml. Split the cells when a maximum cell density of 1 - 2 x 10<sup>6</sup> cells/ml is reached.

**Split ratio**      A ratio of 1:2 is recommended

**Fluid renewal**      Every 3 days

**Freezing recovery**      Allow the cells to recover from the freezing process 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

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  $-150^{\circ}\text{C}$  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  $37^{\circ}\text{C}$  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  $300 \times g$  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,y  
**CSF1PO:** 7  
**D13S317:** 11,12  
**D16S539:** 11  
**D5S818:** 13  
**D7S820:** 8,1  
**TH01:** 7,8  
**TPOX:** 7,9  
**vWA:** 14,19  
**D3S1358:** 15,16  
**D21S11:** 28,29  
**D18S51:** 10,2,18  
**Penta E:** 7,13  
**Penta D:** 8,9  
**D8S1179:** 13,14  
**FGA:** 22