



K562-r

CRL-3344™

Description

K56S-r is a cell line with hematopoietic morphology that was isolated in 1999 from the bone marrow of a 53-year-old female with chronic myeloid leukemia at blast crisis. The paired K562-s and K562-r clones are useful cell line models of sensitivity and resistance to a tyrosine kinase inhibitor used in the treatment of chronic myeloid leukemia. It has applications for immune system disorder research.

Organism: *Homo sapiens*, human

Tissue: Bone; Marrow

Age: 53 years

Gender: Female

Morphology: hematopoietic

Growth properties: Suspension

Disease: Chronic Myeloid Leukemia At Blast Crisis

Cells per vial: 6.0 to 8.0 x 10⁶

Volume: 1.0 mL

Storage Conditions

Product format: Frozen

Storage conditions: Vapor phase of liquid nitrogen

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

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ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Temperature: 37°C

Atmosphere: 95% Air, 5% CO₂

Handling Procedures

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Unpacking and storage instructions:

1. Check all containers for leakage or breakage.
2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C , preferably in liquid nitrogen vapor, until ready for use.

Complete medium: The complete medium for this cell line is RPMI-1640 + 10% FBS + 2 mM L-Glutamine + 1 μM Imatinib Details for preparation of 500 ml of complete media

- Medium: 500 mL RPMI-1640 (ATCC 30-2001)
- Serum: 56 mL FBS (ATCC 30-2020)
- Additive: 5.6 mL L-Glutamine (200 mM, ATCC 30-2214)
- 0.5 mL 1 mM Imatinib working stock (see below)

To prepare 1 mM Imatinib working stock, aseptically combine the following:

- 25 mg Imatinib (Sigma catalog # CDS022173-25MG) into 45 mL Culture grade water (Hyclone catalog # SH30529)

Note: supplement Imatinib at each reseed rather than including in culture medium bottle. The shelf life for Imatinib in culture medium is unknown, so do not use a prepared culture medium bottle for more than 30 days. Additionally, if cell growth appears to slow during cell line expansion, prepare a new bottle of fresh medium.

Handling Procedure: To insure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at -70°C . Storage at -70°C will result in loss of viability.

1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes).
2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.
3. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 150-400 x g for 8 to 12 minutes.
4. Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio) and dispense into a 25 cm^2 or a 75 cm^2 culture flask. It is important to avoid

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excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the complete growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).

5. Incubate the culture at 37°C in a suitable incubator. A 5% CO₂ in air atmosphere is recommended if using the medium described on this product sheet.

Subculturing procedure:

Cultures can be maintained by addition or replacement of fresh medium. Start cultures at 2.5 to 3.5 X 10⁵ cells/mL and maintain between 2 X 10⁵ and 1 X 10⁶ cells/mL.

Medium Renewal: Add fresh medium every 2 to 3 days (depending on cell density).

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: K562-r (ATCC CRL-3344)

References

References and other information relating to this material are available at www.atcc.org.

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