

## Product sheet

### K562-Luc (polyclonal)

#### Product Description

Product Name: K562-Luc (polyclonal)  
Product-ID: CL1001  
Product Format: Frozen  
Lot. Number: Upon arrival on cryo vial

Organism: Homo Sapiens  
Morphology: Lymphoblast  
Growth: Suspension  
Tissue: Bone marrow  
Disease: Chronic Myelogenous Leukemia (CML)  
Parental Cell Line: K562  
Reporter: Firefly Luciferase, Luc2  
Selection: Puromycin 1µg/ml  
BioSafety: BSL2  
Quantity: 1 cryo vial contains 5 Mio cells  
Shipping: Dry Ice

The polyclonal cell line K562-Luc is a derivative of the wildtype K562 lymphoblast cell line achieved through transduction with a lentiviral expression vector. This vector encodes the firefly luciferase gene (*luc2*) controlled by the EF-1 alpha promoter, along with the gene for Puromycin N-acetyl-transferase regulated by the hPGK promoter. K562-Luc demonstrates stable expression of luciferase and resistance to Puromycin.



EF1a Human eukaryotic translation elongation factor 1 alpha promoter  
Luc2 Humanized firefly luciferase, codon optimized  
hPGK Human phosphoglycerate kinase 1 promoter  
Puro Puromycin resistance gene

#### Storage Conditions

Upon receipt, promptly transfer the cells to storage at or below -140°C, preferably within the liquid nitrogen vapor phase. Perform a thorough inspection for any signs of damage or leakage upon arrival.

#### 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.

#### Safety

##### BioSafety Level 2

Blossom BioScience 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.

Blossom BioScience strongly recommends using appropriate personal protective equipment when handling cryovials. Some vials may leak during liquid nitrogen storage and fill with liquid nitrogen, which can cause the cap to eject or the vial to rupture upon thawing. To minimize this risk, cultures should preferably be stored in the vapor phase rather than submerged in liquid nitrogen. ***The recipient of the material is solely responsible for ensuring compliance with all applicable safety guidelines and for conducting a proper risk assessment prior to handling, storage, or use of the material.***

#### Growth Conditions

Temperature: 37°C  
Atmosphere: 95% Air, 5% CO<sub>2</sub>

#### Handling Procedures

##### Complete medium:

Base medium: RPMI 1640 with glutamine  
Supplements: 10% Fetal bovine serum,  
1µg/ml Puromycin (optional)

##### Handling upon arrival:

To ensure 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 -80°C. Storage at -80°C will result in loss of viability.

1. Prepare a Class II Biological Safety Cabinet (BSC) following standard aseptic work practices. Ensure that all work surfaces are disinfected and that the cabinet airflow has been running for several minutes before use.
2. Prepare a T75 culture flask containing 10mL of complete growth medium. For suspension cell cultures, use a flask without tissue culture surface treatment. Ensure that the medium is at room temperature prior to use.
3. Thaw the cryovial rapidly in a 37 °C water bath. To minimize the risk of contamination, ensure that the vial cap remains above the water surface. The thawing process should be completed within 2 minutes.

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4. Remove the cryovial from the water bath as soon as a small ice crystal remains in the center. Immediately decontaminate the exterior of the vial by spraying it with 70% ethanol. From this point onward, all procedures must be performed under strict aseptic conditions within a Class II Biological Safety Cabinet (BSC).
5. Add 0.5mL of complete growth medium to the thawed cryovial and gently resuspend the cell pellet to avoid splashing (use 2ml serological pipette). Slowly, transfer the entire contents of the cryovial into the prepared T75 culture flask containing complete growth medium. Resuspend the cell solution several times.
6. Incubate the culture at 37 °C in a humidified atmosphere with 5% CO<sub>2</sub>. For initial recovery, position the T75 culture flask on its side to reduce the surface area and maintain the cells in closer proximity, thereby facilitating cell growth.
7. After 48 hours, assess cell count and viability. Add 5 mL of complete growth medium to the T75 culture flask. Over the next days check and adjust the cell density as needed by adding complete medium or passaging. Within 4 to 7 days, the culture should exhibit normal growth characteristics.

#### Subculturing procedure:

Cultures should be maintained by periodically adding or replacing fresh growth medium. Initiate new cultures at a density of  $1 \times 10^5$  viable cells/mL and subculture when the cell density reaches approximately  $1 \times 10^6$  cells/mL.

Medium Renewal: Every 2 to 3 days

#### Cryopreservation:

Complete growth medium supplemented with 5% (v/v) DMSO.

#### Citation

If the material is used in any publication, it should be explicitly cited as "K562-Luc (www.blossombioscience.com)".

#### Support and Inquiries

Should you have any questions, please visit our website at [www.blossombioscience.com](http://www.blossombioscience.com) or contact us via email at [info@blossombioscience.com](mailto:info@blossombioscience.com).

#### Disclaimer

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