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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Description

The eGFP/Firefly Luciferase JeKo-1 Cell Line is a JeKo-1 cell line expressing firefly luciferase and enhanced GFP (eGFP) driven by an EF1a promoter, generated by transduction with Firefly Luciferase-eGFP lentivirus (BPS Bioscience #78741), which is a SIN0 self-inactivating lentivirus).

Background

The JeKo-1 mantle cell lymphoma (MCL) cell line was isolated from the peripheral blood mononuclear cells of a 78-year-old female with a large cell variant of MCL showing leukemic conversion. The JeKo-1 cells are highly tumorigenic in SCID mice and have applications in immunology research. These cells overexpress cyclin D1, Bcl-2 (B-cell lymphoma 2), c-Myc and Rb proteins. A Bcl-1/J(H) gene rearrangement was confirmed by polymerase chain reaction. JeKo-1 cells are negative for Epstein-Barr virus and express IgM, a B-cell phenotype. The presence of eGFP and luciferase allow for easy assay readouts, making this cell line a convenient choice.

Application

- Use as target cells in CAR-T or NK co-culture killing assays.
- *In vitro* and *in vivo* bioluminescence imaging (BLI) and fluorescence imaging.

Materials Provided

Components	Format
2 vials of frozen cells	Each vial contains >1 x 10^6 cells in 1 ml of Cell Freezing Medium (BPS Bioscience, #79796)

Parental Cell Line

Jeko-1 cells, Peripheral blood, Lymphoblast, Suspension

Mycoplasma Testing

The cell line has been screened to confirm the absence of Mycoplasma species.

Materials Required but Not Supplied

These materials are not supplied with the cell line but are necessary for cell culture and cellular assays. BPS Bioscience's reagents are validated and optimized for use with this cell line and are highly recommended for best results. Media components are provided in the Media Formulations section below.

Media Required for Cell Culture

Name	Ordering Information
Thaw Medium 2	BPS Bioscience #60184
Growth Medium 2M	BPS Bioscience #78181

Storage Conditions

Cells are shipped in dry ice and should immediately be thawed or stored in liquid nitrogen upon receipt. Do not use a -80°C freezer for long term storage. Contact technical support at support@bpsbioscience.com if the cells are not frozen in dry ice upon arrival.

Media Formulations

For best results, the use of validated and optimized media from BPS Bioscience is *highly recommended*. Other preparations or formulations of media may result in suboptimal performance.

Note: Thaw Media do *not* contain selective antibiotics. However, Growth Media *do* contain selective antibiotics, which are used to maintain selective pressure on the cell population expressing the gene of interest.
Cells should be grown at 37°C with 5% CO_2. BPS Bioscience's cell lines are stable for at least 10 passages when grown under proper conditions.

Media Required for Cell Culture

Thaw Medium 2 (BPS Bioscience #60184):
RPMI-1640 medium supplemented with 10% FBS, 1% Penicillin/Streptomycin.

Growth Medium 2M (BPS Bioscience #78181):
RPMI-1640 medium supplemented with 10% FBS, 1% Penicillin/Streptomycin plus 1 µg/ml of Puromycin.

Cell Culture Protocol

Cell Thawing

1. Swirl the vial of frozen cells for approximately 60 seconds in a 37°C water bath. As soon as the cells are thawed (it may be slightly faster or slower than 60 seconds), quickly transfer the entire contents of the vial to a tube containing 10 ml of pre-warmed Thaw Medium 2.
   Note: Leaving the cells in the water bath at 37°C for too long will result in rapid loss of viability.

2. Immediately spin down the cells at 300 *x g* for 5 minutes, remove the medium and resuspend the cells in 5 ml of pre-warmed Thaw Medium 2.

3. Transfer the resuspended cells to a T25 flask and incubate at 37°C in a 5% CO_2 incubator.

4. After 24 hours of culture, check for cell viability. For a T25 flask, add 3-4 ml of Thaw Medium 2**,** and continue growing in a 5% CO_2 incubator at 37°C until the cells are ready to passage.

5. Cells should be passaged before they reach a density of 2 x 10^6 cells/ml. At first passage and subsequent passages, use Growth Medium 2M**.**

Cell Passage

Dilute the cell suspension into new culture vessels before they reach a density of 2 x 10^6 cells/ml, but no less than 0.2 x 10^6 cells/ml, with Growth Medium 2M. The sub-cultivation ratio should maintain the cells between 0.2 x 10^6 cells/ml and 2 x 10^6 cells/ml.

Cell Freezing

1. Spin down the cells at 300 *x g* for 5 minutes, remove the medium and resuspend the cell pellet in 4°C Cell Freezing Medium (BPS Bioscience #79796) at a density of ~2 x 10^6 cells/ml.

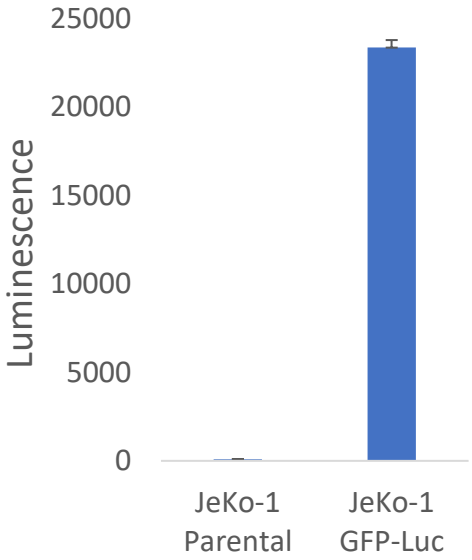
2. Dispense 1 ml of cell suspension into each cryogenic vial. Place the vials in an insulated container for slow cooling and store at -80°C overnight.

3. Transfer the vials to liquid nitrogen the next day for long term storage.

Note: It is recommended to expand the cells and freeze at least 10 vials at an early passage for future use.

Validation Data

A



B

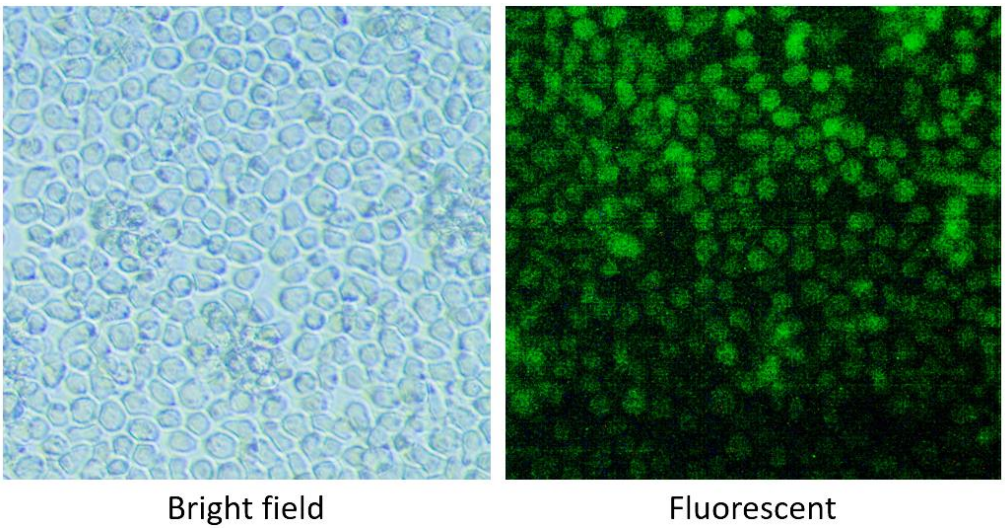


Figure 1. Luciferase activity and eGFP expression in GFP/Firefly Luciferase JeKo-1 Cell Line.
A. Luciferase activity in GFP/Firefly Luciferase JeKo-1 cells and JekKo-1 parental cells measured with One Step™ Luciferase Assay System (BPS Bioscience #60690). B. Bright field and fluorescent images of GFP/Firefly Luciferase JeKo-1 cells.

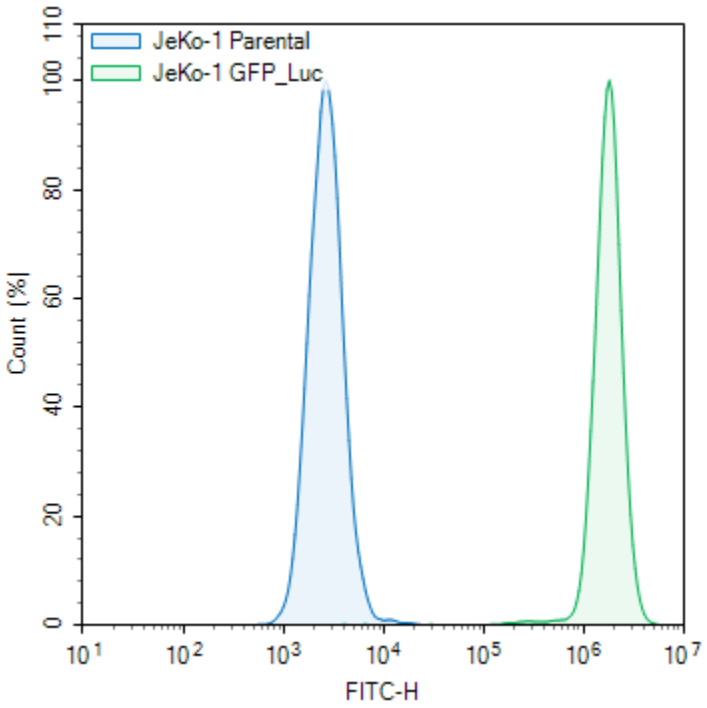


Figure 2. Expression of eGFP in the GFP/Firefly Luciferase JeKo-1 Cell Line by flow cytometry. 20,000 eGFP/Firefly Luciferase JeKo-1 cells (green) and parental JeKo-1 cells (blue) were analyzed by flow cytometry. Y-axis represents the % cell number. X-axis indicates FITC intensity.

Data are representative. For lot-specific information, please contact BPS Bioscience, Inc. at info@bpsbioscience.com

License Disclosure

Visit bpsbioscience.com/license for the label license and other key information about this product.

Troubleshooting Guide

Visit bpsbioscience.com/cell-line-faq for detailed troubleshooting instructions. For all further questions, please email support@bpsbioscience.com.

Related Products

Products	*Catalog #*	*Size*
Firefly Luciferase Lentivirus	79692	500 µl x 2
Firefly Luciferase-eGFP Lentivirus	78741	500 µl x 2
eGFP/Firefly Luciferase U-87 MG Cell Line	78904	2 vials
eGFP/ Firefly Luciferase MM.1S Cell Line	78376	2 vials
eGFP/ Firefly Luciferase K562 Cell Line	78911	2 vials
eGFP/ Firefly Luciferase RS4;11 Cell Line	78926	2 vials