



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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**Description**

The eGFP/Firefly Luciferase Raji Cell Line are engineered human B lymphocyte Raji cells expressing firefly luciferase and enhanced GFP (eGFP) driven by an EF1a promoter. The cells were generated by transduction with Firefly Luciferase-eGFP Lentivirus (BPS Bioscience #78741), which is a SIN (self-inactivating) lentivirus.

**Background**

The Raji line was established from a Burkitt's lymphoma patient. Raji cells constitutively express B cell antigens CD19, CD20, and CD22, and offer a physiologically relevant platform to evaluate cancer-directed immunotherapies such as Chimeric Antigen Receptor (CAR) T cells. The presence of eGFP and luciferase allow for easy assay readouts, making this cell line a convenient choice.

**Application**

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

**Materials Provided**

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

**Parental Cell Line**

Raji, human B lymphocyte cell line, 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	<a href="#">BPS Bioscience #60184</a>
Growth Medium 2E	<a href="#">BPS Bioscience #79638</a>

**Storage Conditions**

Cells are shipped in dry ice and should immediately be thawed or stored in liquid nitrogen upon receipt. Do not use a  $-80^{\circ}\text{C}$  freezer for long term storage. Contact technical support at [support@bpsbioscience.com](mailto: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<sub>2</sub>. 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 2E (BPS Bioscience #79638):*

RPMI-1640 medium supplemented with 10% FBS, 1% Penicillin/Streptomycin plus 0.5 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 content 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 or T75 flask and incubate at 37°C in a 5% CO<sub>2</sub> 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<sub>2</sub> 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<sup>6</sup> cells/ml. Switch to Growth Medium 2E at first and subsequent passages.

#### Cell Passage

Dilute the cell suspension into new culture vessels before they reach a density of 2 x 10<sup>6</sup> cells/ml, with Growth Medium 2E. The sub-cultivation ratio should maintain the cells between 0.2 x 10<sup>6</sup> cells/ml and 2 x 10<sup>6</sup> 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<sup>6</sup> 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

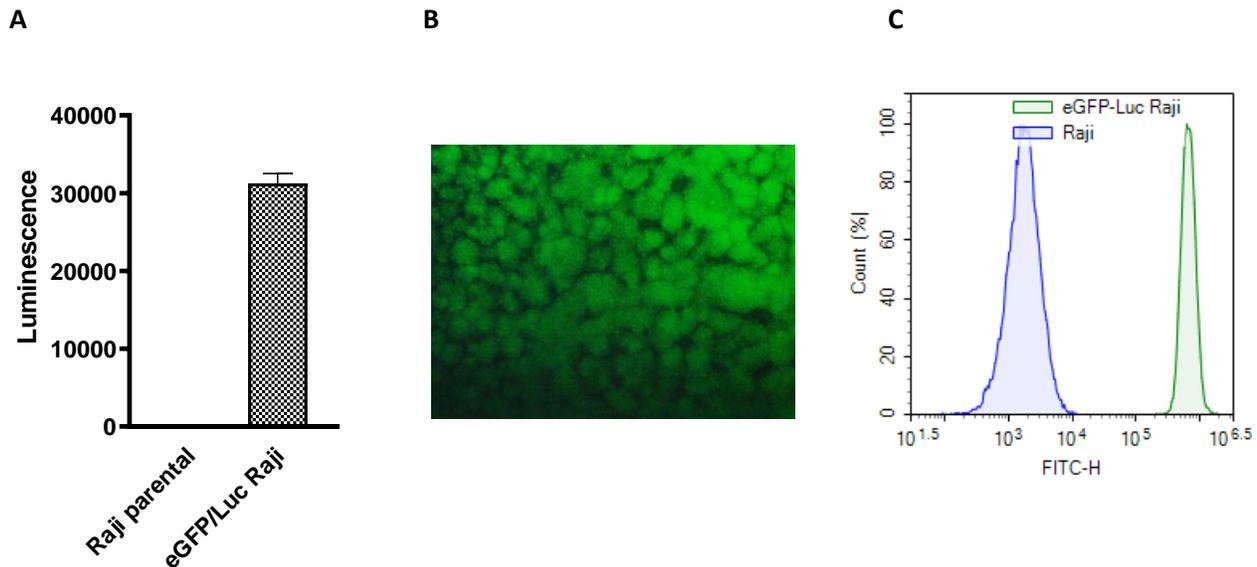


Figure 1. eGFP expression and luciferase activity in the eGFP/Firefly Luciferase Raji Cell Line.

**A.** Luciferase activity in eGFP/Firefly Luciferase Raji cells and Raji parental cells was measured using One Step™ Luciferase Assay System (BPS Bioscience #60690). **B.** Fluorescent image of eGFP/Firefly Luciferase Raji cells. **C.** 25,000 eGFP/Firefly Luciferase Raji cells and parental Raji cells were analyzed by flow cytometry for eGFP expression. The Raji Parental cells are shown in blue, and the eGFP/Firefly Luciferase Raji cells are shown in green.

## License Disclosure

Visit [bpsbioscience.com/license](https://bpsbioscience.com/license) for the label license and other key information about this product.

## Troubleshooting Guide

Visit [bpsbioscience.com/cell-line-faq](https://bpsbioscience.com/cell-line-faq) for detailed troubleshooting instructions. For all further questions, please email [support@bpsbioscience.com](mailto: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