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## Data Sheet

### **Firefly Luciferase – RPMI 8226 Recombinant Cell Line Cat. #: 79834**

#### **Product Description**

Recombinant RPMI 8226 cells constitutively expressing firefly (*Photinus pyralis*) luciferase.

#### **Background**

RPMI 8226 cells are human B cells isolated from a plasmacytoma/myeloma patient. RPMI 8226 cells constitutively express B-Cell Maturation Antigen (BCMA), and offer a physiologically relevant platform to evaluate cancer-directed immunotherapies, such as Chimeric Antigen Receptor (CAR) T cells. The Firefly Luciferase – RPMI 8226 Recombinant Cell Line makes an excellent target to measure specific killing of CAR-T or NK cells targeting BCMA.

#### **Applications**

- Use as a control for co-culture killing assays.

#### **Host Cell**

RPMI-8226, human B lymphocyte cell line from a plasmacytoma/myeloma

#### **Format**

Each vial contains  $2 \times 10^6$  cells in 1 ml of FBS with 10% DMSO.

#### **Storage**

Store in liquid nitrogen immediately upon receipt.

#### **Cell Culture**

**Thaw Medium 10 (BPS Bioscience, #79704):** RPMI 1640 medium supplemented with 10% FBS, 1 mM Sodium pyruvate, 1% Non-essential amino acids, 1% Penicillin/streptomycin.

**Growth Medium 10A (BPS Bioscience, #79835):** Immuno culture medium with 400 µg/ml of Geneticin (Life technologies, #11811031) to ensure recombinant expression.

Cells should exhibit a typical cell division time of ~36 hours.

It is recommended to quickly thaw the frozen cells from liquid nitrogen in a 37°C water bath, transfer to a tube containing 10 ml of Thaw Medium 10 (**no Geneticin**), spin the cells down, remove the supernatant, and then re-suspend the cells in pre-warmed Thaw Medium 10 (**no Geneticin**). Then transfer the re-suspended cells to a T25 flask and culture in a 37°C CO<sub>2</sub>

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incubator overnight. Fresh media should be added every 2-4 days, and cells should be split weekly at 1:5 to 1:10. After the first passage, switch to **Growth Medium 10A (contains geneticin)**.

To freeze the cells down, rinse the cells with Phosphate Buffered Saline (PBS), add Thaw Medium 10 (**no Geneticin**) and count the cells, then transfer to a tube, spin the cells down, and resuspend in 4°C Freezing Medium (10% DMSO + 90% FBS) at  $\sim 2 \times 10^6$  cells/ml. Dispense 1 ml of cell aliquots into each cryogenic vial. Place vials in an insulated container for slow cooling and store at -80°C overnight. Transfer to liquid nitrogen the next day for storage. It is recommended to expand the cells and freeze down at least 10 vials of cells at an early passage for future use.

### **Mycoplasma Testing**

This cell line has been screened using the Venor™ GeM Mycoplasma Detection Kit, PCR Based (Sigma, #MP0025) to confirm the absence of Mycoplasma contamination.

### **Materials Required by Not Supplied**

- Thaw Medium 10 (BPS Bioscience, #79704)
- Growth Medium 10A (BPS Bioscience, #79835)
- 96-well tissue culture-treated white clear-bottom assay plate
- ONE-Step luciferase assay system (BPS Bioscience, #60690)
- Luminometer

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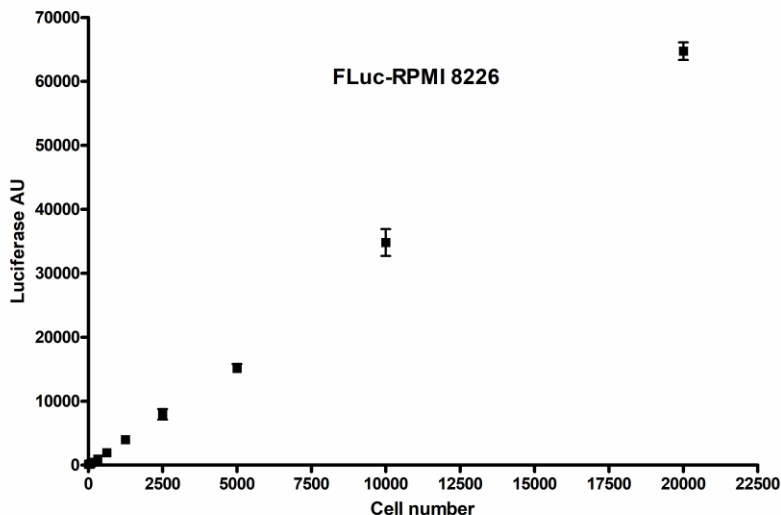
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**Figure 1. Luciferase activity of Firefly Luciferase RPMI 8226 recombinant cells**

Firefly Luciferase RPMI 8226 recombinant cells were counted seeded into a 96-well plate at various densities, and luciferase activity was measured using the ONE-Step luciferase assay system (BPS Bioscience, #60690).

**License Disclosure**

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**Related Products**

<b>Product</b>	<b>Cat. #</b>	<b>Size</b>
ONE-Step Luciferase Detection Reagent	60690-1	10 ml
ONE-Step Luciferase Detection Reagent	60690-2	100 ml
Thaw medium 10	79704	100 ml
Growth Medium 10A	79835	500 ml
Firefly Luciferase - CHO Recombinant Cell Line	79725	2 vials
BCMA / Luciferase CHO Recombinant Cell Line	79724	2 vials
CD19 / Firefly Luciferase - CHO Recombinant Cell Line	79714	2 vials
Firefly Luciferase Lentivirus (G418, Hygromycin and Puromycin)	79692	500 µl x 2

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