IVISbrite™ U87MG Red F-luc Bioluminescent Tumor Cell Line

Product Number: BW124577

Material Provided

Cells: 2 x 1 mL frozen aliquots (BW124577V)

Format: 1.0 x 10^6 cells / mL in 95% FBS, 5% DMSO

DESIGNATION	U87MG Red F-luc
Tissue	Human: Glioblastoma
Source of Parental Line	ATCC (HTB-14)
Gene Transfer Vehicle	Red F-luc-Puro 3d generation lentivirus
Bioluminescence In Vitro	At least 8,000 photons/cell/sec. Exact number will vary depending on imaging and culturing conditions.
Recommended Media and FBS	Eagle's MEM ATCC Cat. No. 30-2003. Supplement the above with 10% Hyclone Fetal Bovine Serum (FBS) GE HealthCare Cat. No. SH30071.
Recommended Storage Conditions	Remove frozen cells from dry ice packaging and immediately place cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready to use.
Cell Doubling Time	34 hours
Other Recommendations	When initially thawing, use T25 flask or 10cm plate. Cells should be ready to expand within 2-5 days. Antibiotics can be used in the media if desired after the initial thaw (puromycin at 2ug/mL). Refer to Cell Culture Guidelines for more detailed instructions.

The Features

Revvity IVISbrite™ cell line models offer researchers the ability to:

- Monitor early tumor development
- Monitor tumor growth and metastases in vivo
- Quantify tumor burden in the whole animal
- Follow responses to therapeutic treatments non-invasively in longitudinal studies using the same cohorts of mice

Murine Pathogen Free

All Revvity cell lines are confirmed to be pathogen free by the IMPACT Profile I (PCR) at the University of Missouri Research Animal Diagnostic and Investigative Laboratory.

Cell Line Stability

Cell may undergo genotypic changes resulting in reduced responsiveness over time in normal cell culture conditions. Genetic instability is a biological phenomenon that occurs in all stably transfected cells. Therefore, it is recommended to prepare an adequate number of frozen stock at early passages.

Product Warranty

Revvity warrants that cells will be viable upon shipment from Revvity for a period of thirty days, provided they have been properly stored and handled during this period.

Human Brain Cancer Cell Line: U87MG Red F-luc

U87MG Red F-luc is a luciferase expressing cell line which was stably transfected with firefly luciferase gene from *Luciola Italica* (Red F-luc). The cell line was established by transducing lentivirus containing Red F-luc luciferase under the control of human ubiquitin C promoter. These cells will serve as a new tool to detect drug efficacy in vitro and in vivo with high sensitivity.

Bioluminescence image of U87MG Red F-luc orthotopic tumor

Growth Curve of U87MG Red F-luc Cells

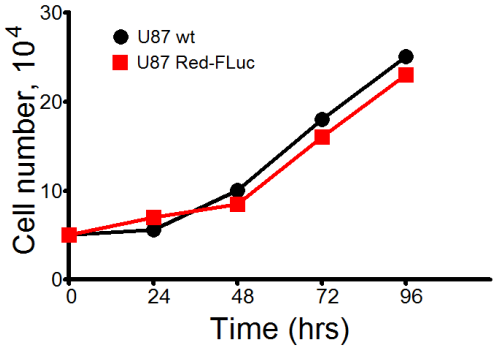
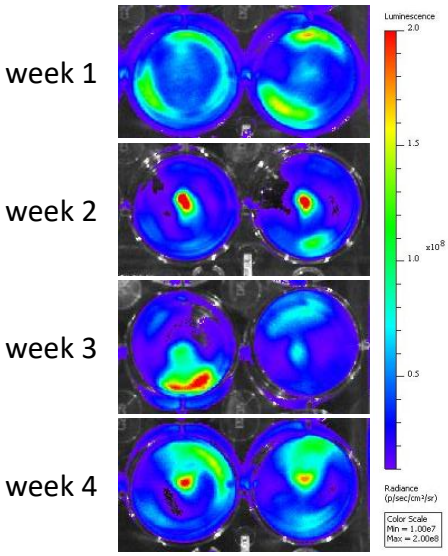


Figure 1. 5 x10^4 cells were plated on 6cm plate and the total numbers of cells were counted every 24 h using a Nexcelom automatic cell counter.

In Vitro BLI Signal Stability



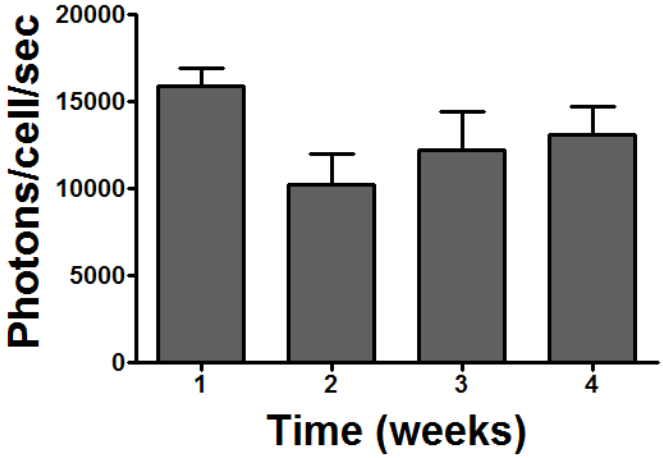


Figure 2. 5 x10^4 cells were plated per well in 24-well plates. Cells were incubated at 37 °C for recovery overnight and luciferase assay was performed using an IVIS® SpectrumCT. Each experiment was done in quadruplicates. The assays were repeated over four weeks period of time. Bioluminescence data was analyzed using the Living Image 4.0 software.

Subcutaneous Tumor Growth in a Nu/nu Mouse

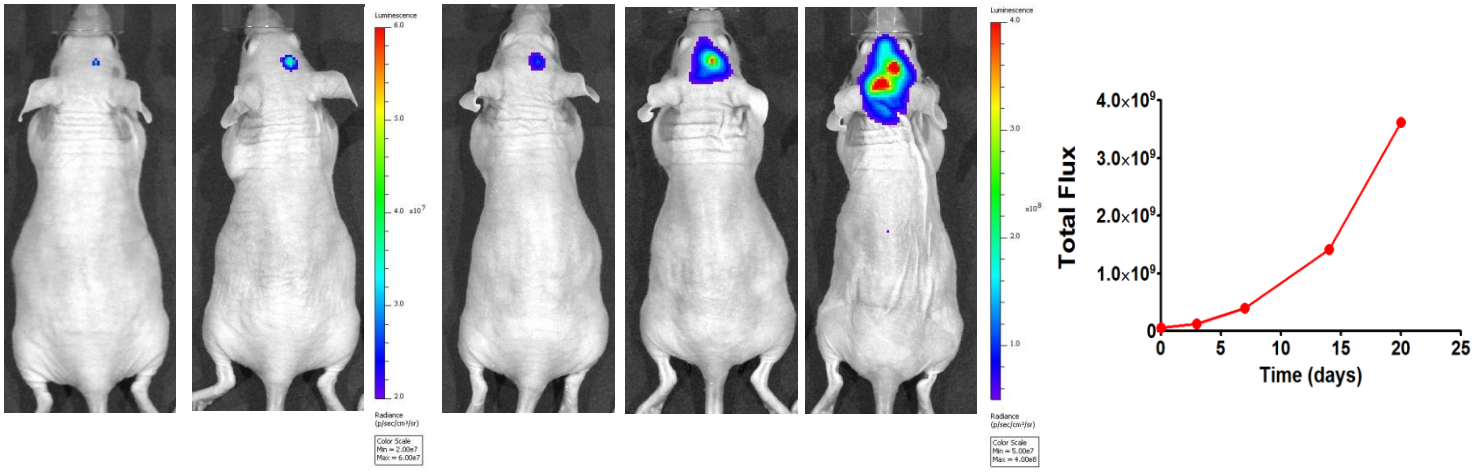


Figure 3. 2 x 10^5 U87MG Red F-luc cells were injected orthotopically into the brain of female nu/nu mouse. Tumor growth was monitored for luciferase expression using the Revvity IVIS® Spectrum at various time points. For luciferase expression, mice were imaged 10 minutes post i.p. injection of luciferin at 150mg/kg at various time points. The image above shows tumor growth from a representative mouse.

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