

Research use only. Not for use in diagnostic procedures.

IVISbrite™ Bioluminescent Tumor Cell Line

IVISbrite™ MCF7 Red F-luc Bioluminescent Tumor Cell Line

Product Number: BW119262

Material Provided

Cells: 2 x 1 mL frozen aliquots (BW119262V)

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

DESIGNATION	MCF7 Red F-luc
Tissue	Human: Mammary Gland Adenocarcinoma
Source of Parental Line	ATCC (HTB-22)
Gene Transfer Vehicle	Red F-luc-Puro 3d generation lentivirus
Bioluminescence In Vitro	At least 10,000 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.
Average Doubling Time	40 hours
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.
Other Recommendations	When initially thawing, use T25 flask or 10cm plate.
	Cells should be ready to expand within 3-7 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 the rapeutic 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

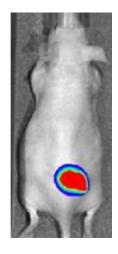
Cell may undergo genotypic changes resulting in reduced responsiveness over time in normal cell culture conditions. Genetic instability is a biological phenomenon that occurs in all stably transfected cells. Therefore, it is recommended to prepare an adequate number of frozen stock at early passages.

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 Mammary Gland Adenocarcinoma Cell Line: MCF7 Red F-luc

MCF7 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 MCF7 Red F-luc subcutaneous tumor



Growth Curve of MCF7 Red F-luc Cells

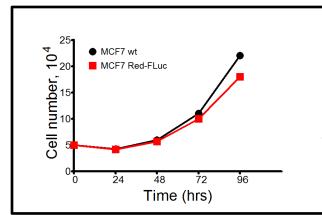


Figure 1. 5×10^4 cells were plated on 6cm plate and the total numbers of cells were counted every 24 h using a Nexcelom automatic cell counter.

In Vitro BLI Signal Stability

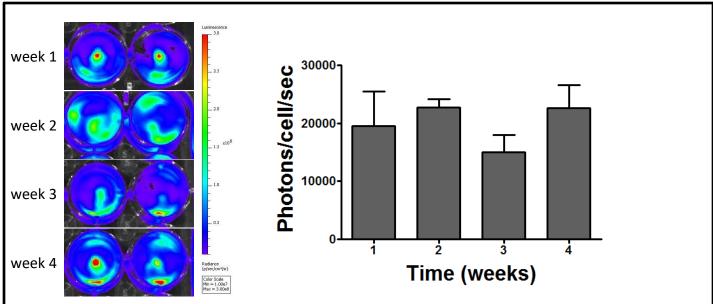


Figure 2. 5 x10⁴ cells were plated per well in 24-well plates. Cells were incubated at 37 °C for recovery overnight and luciferase assay was performed using the Revvity IVIS® SpectrumCT. Each experiment was done in quadruplicates. The cells were maintained in continuous culture over four weeks and weekly luciferase assay was performed. Bioluminescence data was analyzed using the Living Image 4.0 software.



Subcutaneous Tumor Growth in a Nu/nu Mouse

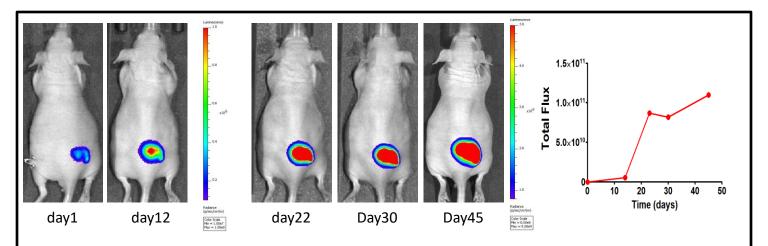


Figure 3. 1 x 10^6 MCF7 Red F-luc cells were injected subcutaneously into the dorsal region near the thigh of female nu/nu mouse. Tumor growth was monitored for luciferase expression using the Revvity IVIS® Spectrum at various time points. Mice were imaged 10 minutes post i.p. injection of luciferin at 150 mg/kg at various time points. The image above shows tumor growth from representative mouse. Cells were injected after 2 days post implantation of estrogen pellet (17β -Estradiol, 0.36 mg/pellet, 60 day release)

Tumor Growth Comparison Between Wild Type and Red F-luc Cells

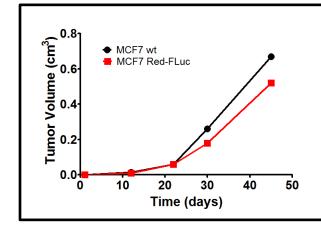


Figure 4. 3 x 10^6 MCF7 Red F-luc and MCF7 parental cells were injected subcutaneously into the dorsal region near the thigh of female nu/nu mouse. Tumor growth was monitored by caliper measurements at various time points. Similar tumor growth rate was observed for both parental and Red F-luc transduced cell lines.

This product is not for resale or distribution, except by authorized distributors. This product is sold for in vivo animal research use only and is not intended for any diagnostic use or procedures. The information provided in this document is valid for the specified lot number and date of analysis. This information is for reference purposes only and does not constitute a warranty or guarantee of the product's suitability for any specific use. Revvity, Inc., its subsidiaries, and/or affiliates (collectively, "Revvity") do not assume any liability for any errors or damages arising from the use of this document or the product described herein. REVVITY EXPRESSLY DISCLAIMS ALL WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, REGARDLESS OF WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED, ALLEGEDLY ARISING FROM ANY USAGE OF ANY TRADE OR ANY COURSE OF DEALING, IN CONNECTION WITH THE USE OF INFORMATION CONTAINED HEREIN OR THE PRODUCT ITSELF. Additionally, unless otherwise agreed to in writing by Revvity pursuant to a separate written agreement, no commercial use of this product is allowed. "Commercial use" means any and all uses of this product and/or its derivatives by a party for money or other consideration and may include without limitation: (1) product manufacture; (2) providing services, information or data to another party for remuneration; and/or (3) resale of the product or its derivatives, whether or not such product or derivatives are resold for use in research. Commercial use does not include the original purchaser providing the product to its contractor solely for use on the original purchaser's research; provided that all product materials are returned to the original purchaser and/or destroyed by the contractor upon completion of such project.

