

Bioware Ultra Cell Line EL4-luc2

The Features

Caliper Life Sciences Bioware Ultra Cell Line Models Offer 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.

Mycoplasma Free

EL4-luc2 cell line has been confirmed to be Mycoplasma free by PCR at the University of Missouri Research Animal Diagnostic and Investigative Laboratory.

Mouse Lymphoma Cell Line: EL4-luc2

EL4-luc2 is a luciferase expressing cell line which was stably transfected with firefly luciferase gene (*luc2*). The cell line was established by transducing lentivirus containing luciferase 2 gene 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 in following models:

- Testing immunomodulation of drugs *in vivo*
- *In vivo* syngeneic lymphocyte tumor model

General Information

DESIGNATION	EL4-luc2
Tissue	Mouse: Lymphoma
Source of Parental Line	ATCC (TIB-39™)
Mycoplasma testing	Mycoplasma testing at University of Missouri Research Animal Diagnostic and Research Laboratory EL4-luc2-4H7 negative on 12/4/2007
Gene Transfer Vehicle	pGL4 luc2 Lentivirus
Bioluminescence <i>In Vitro</i>	Approximately 70-250 photons/sec/cell. Exact number will vary depending on imaging and culturing conditions.
Recommended Media	High Glucose DMEM Supplement the above with: Final concentration 50 mL Heat Inactivated FBS (Hyclone) 10%
Other Recommendations	When initially thawing, use a T25 flask. Cells should be ready to expand the next day. We recommend not using any antibiotics in medium.

In Vitro Luciferase Activity

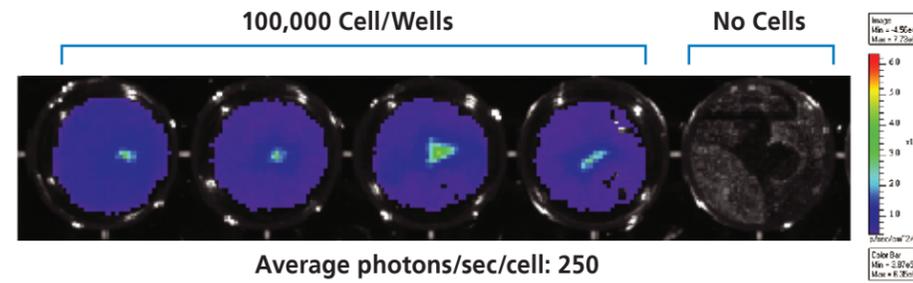


Figure 1. 1×10^5 cells were plated per well in black-walled 24-well plates. Cells were incubated for 37 °C for recovery overnight and luciferase assay was performed using an IVIS Spectrum. Each experiment was done in quadruplicates. The assays were repeated over four weeks period of time. Bioluminescence data was analyzed using the Living Image 3.0 software.

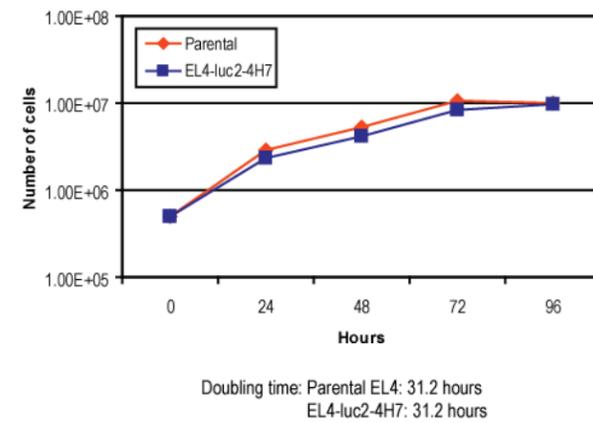


Figure 2. 5×10^5 cells were plated on T25 flasks and the total numbers of cells were counted every 24 h using a Nexcelom automatic cell counter. Cell numbers were plotted in logarithmic scale. Proliferation rate was calculated using a previously reported formulation.

Intravenous Injection: Experimental Metastases

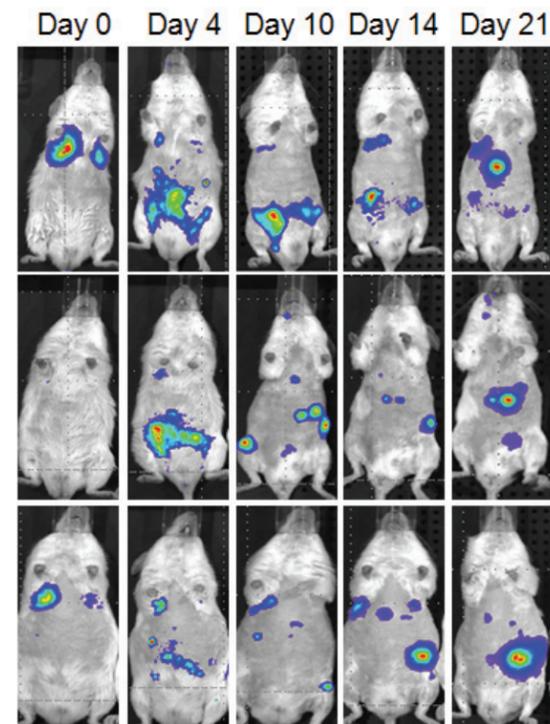
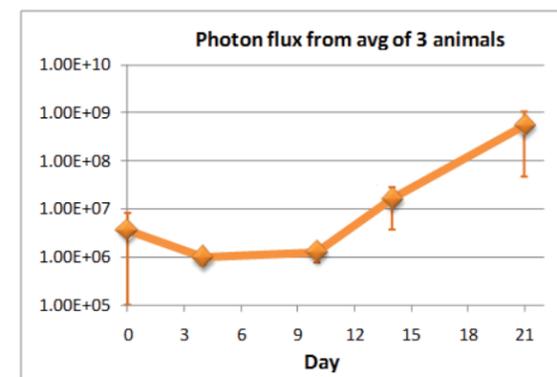


Figure 3. In vivo growth of EL4-luc2 cells. 1×10^6 cells were injected intravenously in C57 Albino mice. Bioluminescent images were taken at various time points with IVIS Spectrum.



Contact Information:

If you have any questions regarding these cell lines, please contact Caliper at 508-497-6592 or e-mail: reagents@caliperls.com
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References

- Cuthbert and Lipsky (1997) Regulation of proliferation and Ras localization in transformed cells by products of mevalonate metabolism. *Cancer Research* 37:3498-3505.
- Sherley, Stadler, and Stadler (1995) A quantitative method for the analysis of mammalian cell proliferation in culture in terms of dividing and non-dividing cells. *Cell Proliferation* 28:137-144.
- Cao et al. (2006) *In vivo* visualization of embryonic stem cell survival, proliferation, and migration after cardiac delivery. *Circulation* 113:1005-1014.
- pGL4 luciferase reporter vectors technical manual. TM 250. Promega Corp. (2007)

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