

IVIS | Bioware Ultra **Red**

Brighter cell lines labeled with tdTomato and luciferase

Caliper Life Sciences is pleased to introduce its newest set of light producing tumor cell lines dual labeled with fluorescent and bioluminescent reporters. These cells are either mono labeled with the Red fluorescent protein (RFP) tdTomato or dual labeled with RFP tdTomato and luciferase. These fluorescently labeled cell lines allows for detection of cells both *in vivo* and *ex vivo*.

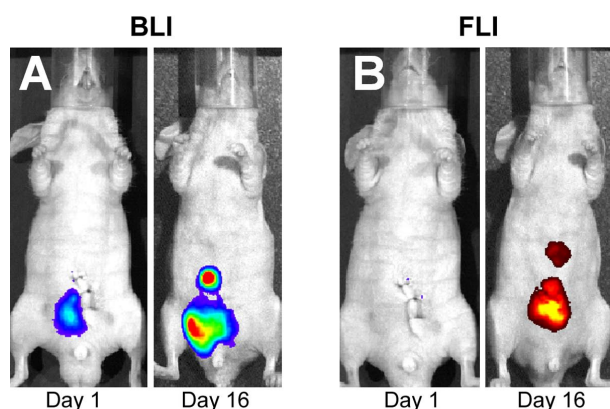


Figure 1. Bioluminescent and Fluorescent imaging of PC-3M tumor growth dual labeled with luciferase and tdTomato. Mice were implanted with 5×10^5 PC-3M-luc2-tdTomato cells orthotopically. Representative image on left shown of mice imaged 1 day and 18 days post implant. Notice that luciferase expression can be detected immediately after implantation.

Bioware Ultra dual labeled cell lines used in conjunction with Caliper's biophotonic imaging technology offer unique opportunities to measure cell growth and metastasis in a variety of models.

- Measure total cells with fluorescence and metabolizing cells with bioluminescence
- Monitor early tumor development and detect micrometastases sooner
- Perform *in vitro* and *ex vivo* analysis with the fluorescent reporter

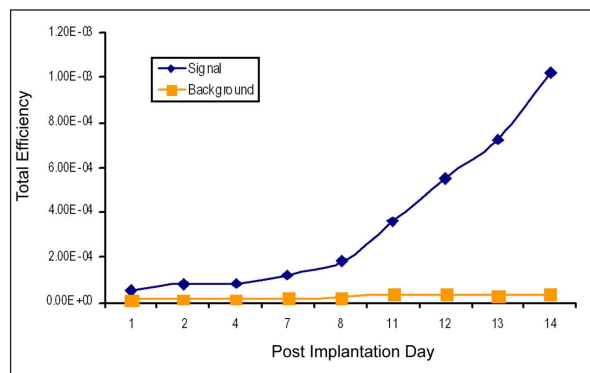
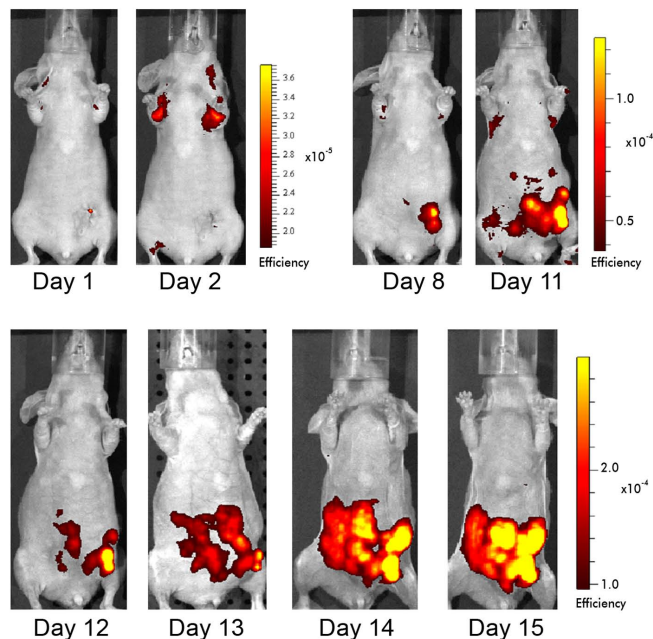


Figure 2. Non-invasive fluorescent imaging of 4T1-tdTomato tumor growth in nu/nu mice. 3×10^5 cells were implanted orthotopically into mammary fat pads of nu/nu female mice. Images were taken with IVIS Spectrum using auto exposure and spectral unmixing. Chart shows tumor signal from the whole body. Metastases observed as early as 8 days post implant.

Caliper Life Sciences currently offers four cell lines that are either labeled with one fluorescent reporter or dual labeled with fluorescent and bioluminescent reporter.

BIOWARE ULTRA	MODEL	AVAILABLE
4T1-tdTomato	Breast Cancer (Murine)	Yes
4T1-luc2-tdTomato	Breast Cancer (Murine)	Yes
PC-3M-tdTomato	Prostate Cancer	Yes
PC-3M-luc2-tdTomato	Prostate Cancer	Yes
MDA-MB-231-tdTomato	Breast Cancer	Yes
MDA-MB-231-luc2-tdTomato	Breast Cancer	Yes

- All Bioware Ultra cell lines from Caliper Life Sciences meet the highest standards and are confirmed to be pathogen free. The *in vitro* growth rate of these cell lines is similar to their parental cell lines and the stability of luciferase expression is tested for a minimum of 4 weeks.
- Fluorescence and Luciferase expressed from the human UbC promoter
- Red Fluorescent proteins licensed from University of San Diego, CA
- *Luc2* pGL4 vector licensed from Promega Corporation, Madison, WI

Contact Information:

If you have any questions regarding these cell lines please contact Caliper at 508.497.6592 or e-mail: reagents@caliperLS.com