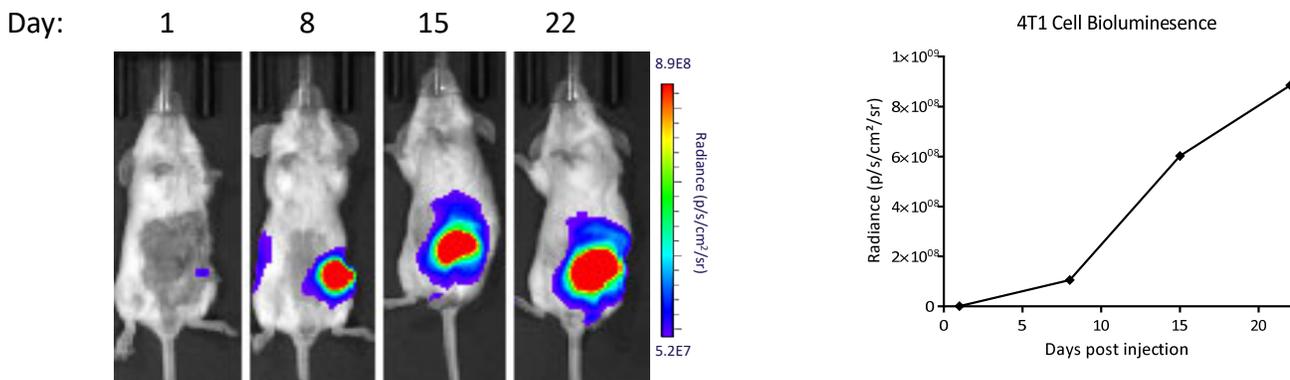


# Technical Data Sheet: 4T1-Luc2

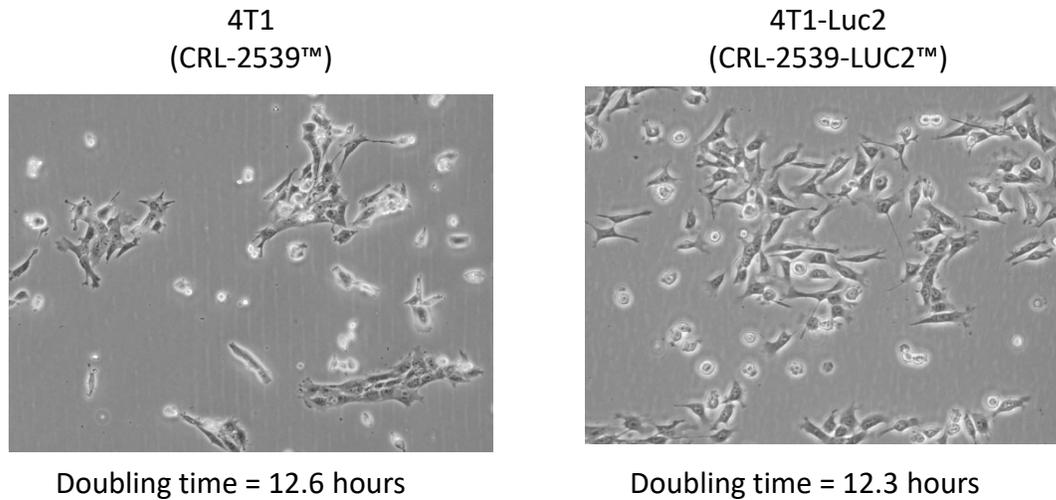
<b>ATCC® Number</b>	CRL-2539-LUC2™
<b>Organism</b>	<i>Mus musculus</i>
<b>Tissue/Disease Source</b>	Mammary Tumor
<b>Product Description</b>	<p>This luciferase expressing cell line was derived from 4T1 cell line by transduction with lentiviral vector encoding firefly luciferase gene (<i>luc2</i>) and subsequently through single cell cloning.</p> <ul style="list-style-type: none"> <li>• Signal noise ratio: <math>\geq 1,000</math></li> <li>• Bioluminescence: <math>\geq 100,000</math> photons/cell/sec (subject to imaging and culture condition)</li> <li>• Confirmed to be murine pathogen free</li> </ul>
<b>Application</b>	Excellent signal/background ratio and stable Luciferase expression make this cell line ideal for <i>in vivo</i> bioluminescence imaging of xenograft animal model to study human cancer and monitor activity of anti-cancer drug. It also can be used in cell-based assays for cancer research.

## *In vivo* Bioluminescent Imaging



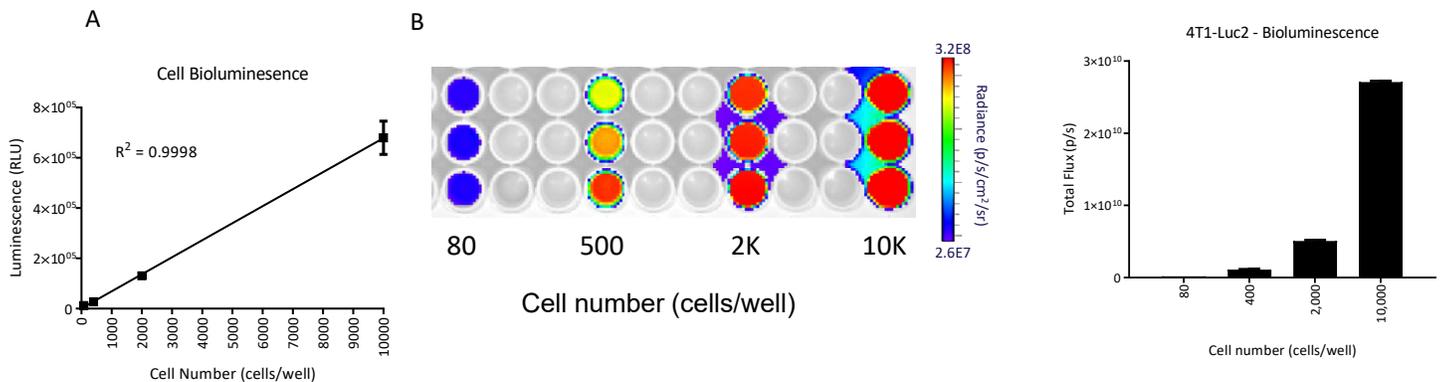
**Figure 1: *In vivo* detection of luciferase activity of 4T1-Luc2.** 4T1-Luc2 cells ( $1.25 \times 10^6$ ) were injected into the mammary fat pad of female Balbc/cfC3H mice. Tumor growth was monitored weekly using a Xenogen IVIS Spectrum. *In vivo* bioluminescence imaging demonstrated the progression of tumors.

## Cell Morphology



**Figure 2: Cell morphology of 4T1 parental and 4T1-Luc2.** Cells were maintained in ATCC recommended culture conditions. Cell morphology was observed under microscopy and images were captured by digital camera.

## Luciferase Expression



**Figure 3: Linearity of luminescence and of in vitro quantification of luciferase activity of 4T1-Luc2.** Cells were seeded in a 96-well plate at indicated cell numbers per well, and Bright-Glo (Promega) was added to the indicated wells. The luminescence of the plate was read within 10 minutes using a luminescence plate reader (A) and determined to have a linear correlation of bioluminescence intensity with cell numbers. (B) The plate was imaged using a Xenogen IVIS Spectrum to quantify photons emitted per cell.