Technical Data Sheet: EL4-Luc2

<table>
<thead>
<tr>
<th>ATCC® Number</th>
<th>TIB-39-LUC2™</th>
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<tbody>
<tr>
<td>Organism</td>
<td>Mus musculus</td>
</tr>
<tr>
<td>Tissue/Disease Source</td>
<td>Lymphoma</td>
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**Product Description**
This luciferase expressing cell line was derived from EL4 cell line by transduction with a lentiviral vector encoding firefly luciferase gene (luc2) and subsequently through single cell cloning.
- Signal noise ratio: ≥ 1,000
- Bioluminescence: ≥ 20,000 photons/cell/sec (subject to imaging and culture conditions)
- Confirmed to be murine pathogen-free

**Application**
Excellent signal/background ratio and stable luciferase expression make this cell line ideal for *in vivo* 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.

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**In vivo Bioluminescent Imaging**

![Bioluminescent Imaging](image)

**Figure 1. In vivo detection of luciferase activity of EL4-Luc2.** EL4-Luc2 cells (3 x 10⁶) were injected subcutaneously into the dorsal region near the thigh of female C57BL/6N mice. Tumor growth was monitored weekly using a Xenogen IVIS Spectrum. *In vivo* bioluminescence imaging demonstrated the progression of tumors.
**Cell Morphology**

![Cell Morphology Images](image)

**Figure 2. Cell morphology of EL4 parental and EL4-Luc2.** Cells were maintained in ATCC recommended culture conditions. Cell morphology was observed under microscopy and images were captured by digital camera.

**Luciferase Expression**

![Luciferase Expression Images](image)

**Figure 3. Linearity of luminescence and of in vitro quantification of luciferase activity of EL4-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 that photons emitted per cell.