Technical Data Sheet: B16-F10-Luc2

<table>
<thead>
<tr>
<th>ATCC® Number</th>
<th>CRL-6475-LUC2™</th>
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<tbody>
<tr>
<td><strong>Organism</strong></td>
<td><em>Mus musculus</em></td>
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<tr>
<td><strong>Tissue/Disease Source</strong></td>
<td>Melanoma</td>
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**Product Description**

This luciferase expressing cell line was derived from B16-F10 cell line by transduction with 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 condition)
- 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.

**In vivo Bioluminescent Imaging**

![In vivo Bioluminescent Imaging](image)

**Figure 1:** **In vivo detection of luciferase activity of B16-F10-Luc2.** B16-F10-Luc2 cells (2 x 10⁶) were injected subcutaneously into the dorsal region near the thigh of female C57/BL6 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 B16-F10 parental and B16-F10-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 B16-F10-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.

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