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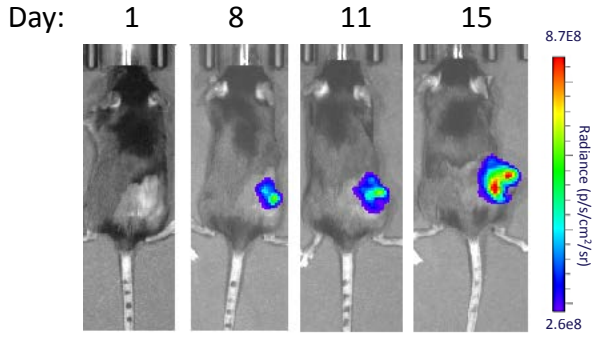
Technical Data Sheet: B16-F1-Luc2

ATCC® Number	CRL-6323-LUC2™
Organism	*Mus musculus*
Tissue/Disease Source	Melanoma
Product Description	This luciferase expressing cell line was derived from B16-F1 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



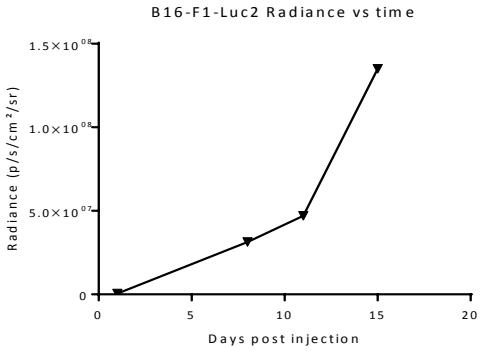


Figure 1: *In vivo* detection of luciferase activity of B16-F1-Luc2. B16-F1-Luc2 cells (2 x 10^6) were injected subcutaneously into the dorsal region near the thigh of female C57/BL6 mice. Tumor growth was monitored weekly using a Xenogen IVIS Spectrum. *In vivo* bioluminescence imaging demonstrated the progression of tumors.

Cell Morphology

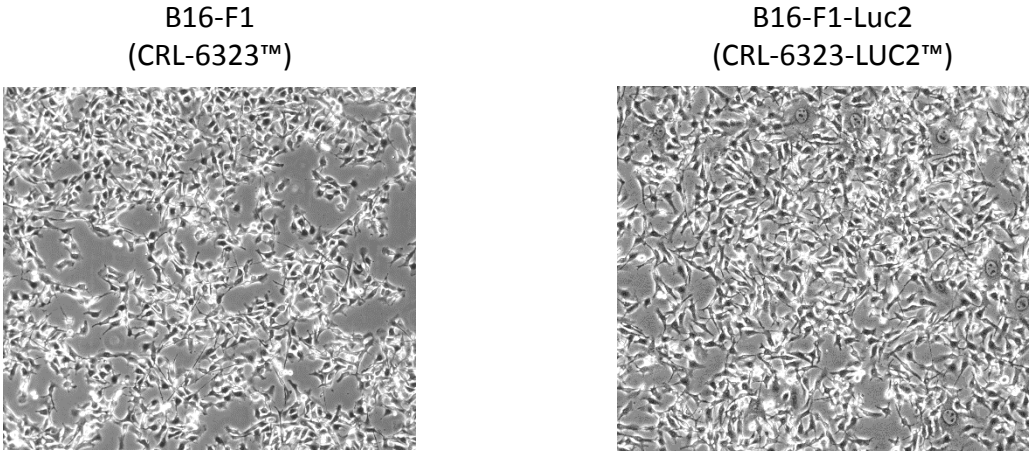


Figure 2: Cell morphology of B16-F1 parental and B16-F1-Luc2. Cells were maintained in ATCC recommended culture conditions. Cell morphology was observed under microscopy and images were captured by digital camera.

Luciferase Expression

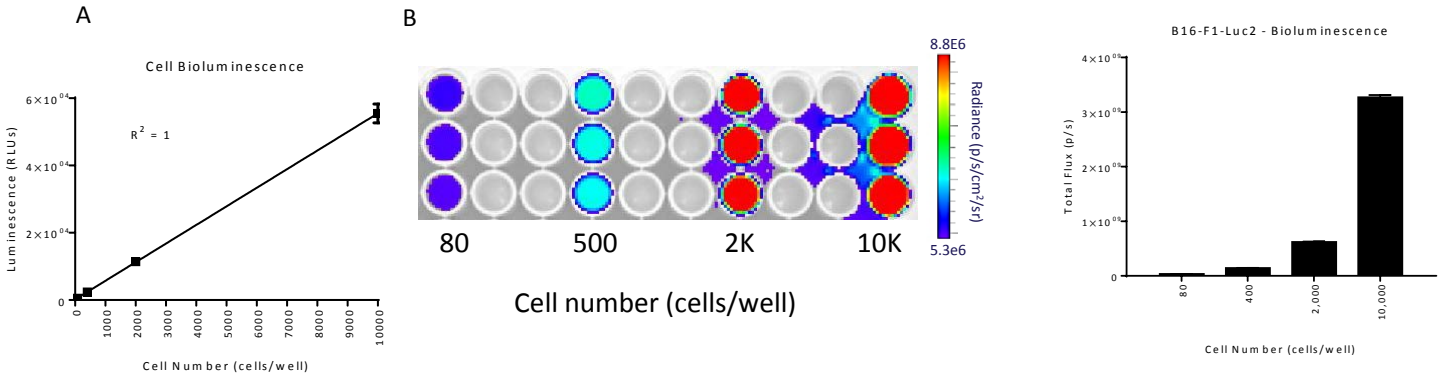


Figure 3: Linearity of luminescence and of *in vitro* quantification of luciferase activity of B16-F1-Luc2. Cells were seeded in a 96-well plate at indicated cell numbers per well, and Bright-Glo (Promega) was added to the indicated wells. The luminescence of the plate was read within 10 minutes using 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.