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Technical Data Sheet: LL/2-Luc2

ATCC® Number	CRL-1642-LUC2™
Organism	*Mus musculus*
Tissue/Disease Source	Lewis lung carcinoma
Product Description	This luciferase expressing cell line was derived from LL/2 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: ≥ 10,000 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.

In vivo Bioluminescent Imaging

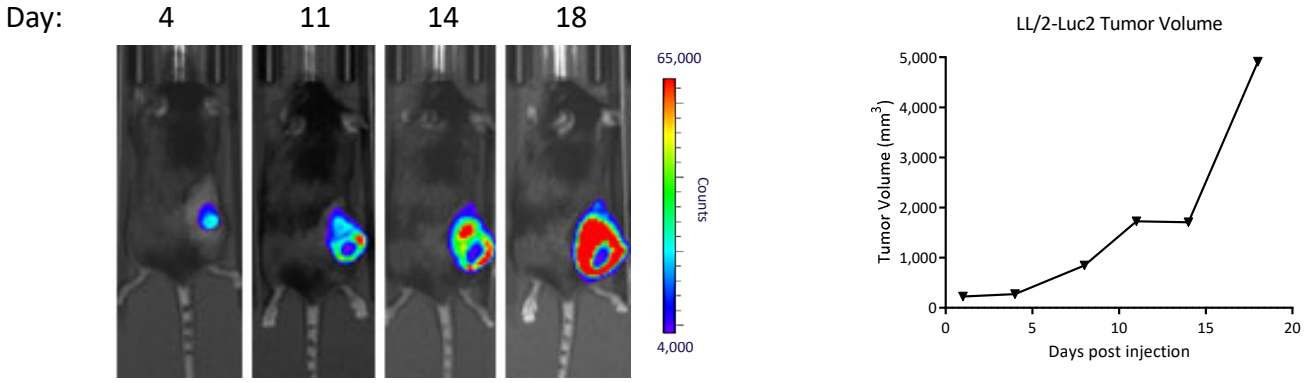

Figure 1. *In vivo* detection of luciferase activity of LL/2-Luc2. LL/2-Luc2 cells (3 x 10^6) were injected subcutaneously into the dorsal region near the thigh of female C57BL mice. Tumor growth was monitored weekly using a Xenogen IVIS Spectrum. *In vivo* bioluminescence imaging demonstrated the progression of tumors.

Cell Morphology

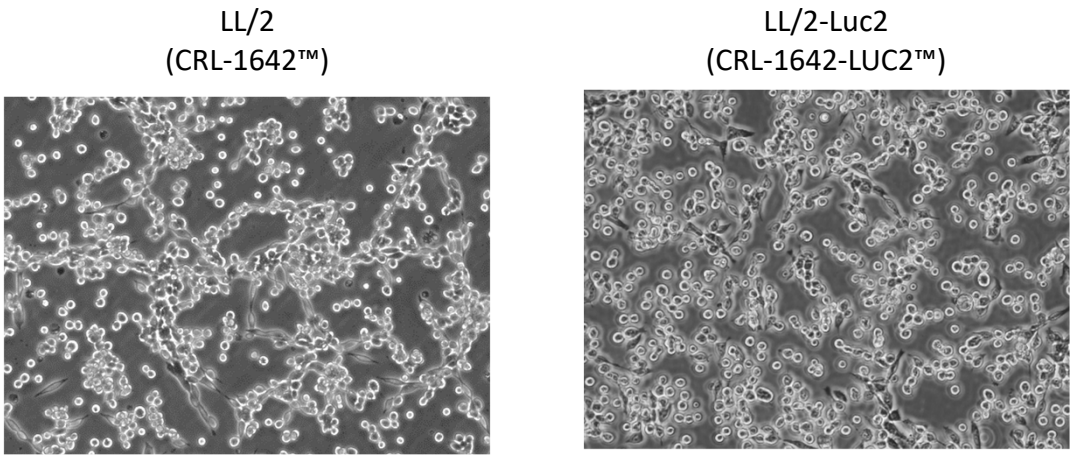

Figure 2. Cell morphology of LL/2 parental and LL/2-Luc2. Cells were maintained in ATCC recommended culture conditions. Cell morphology was observed under microscopy and images were captured by digital camera.

Luciferase Expression

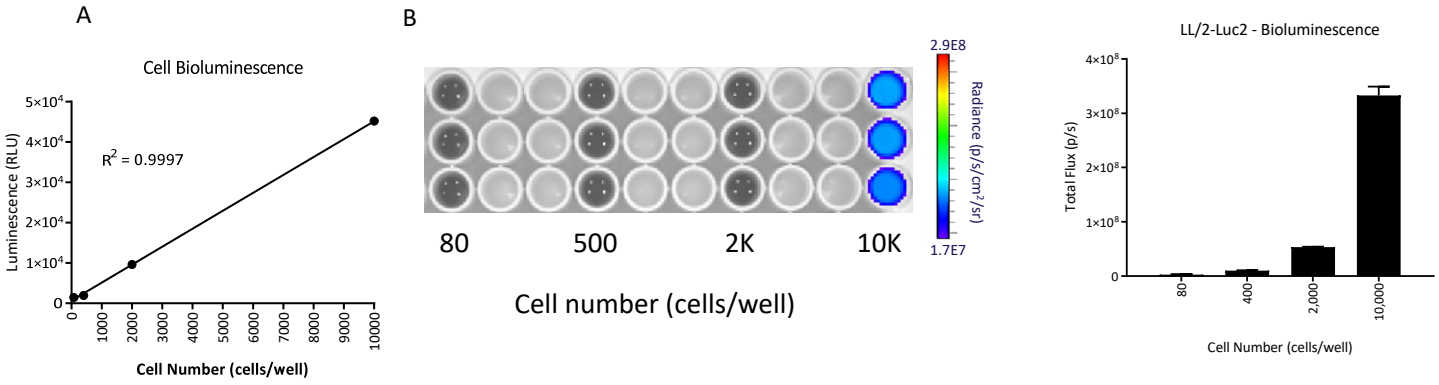

Figure 3. Linearity of luminescence and of *in vitro* quantification of luciferase activity of LL/2-Luc2. Cells were seeded in a 96-well plate at indicated cell numbers per well, and Bright-Glo (Promega) was added to the indicated wells. The luminescence of the plate was read within 10 minutes using 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.