

Technical Data Sheet: HCT-15-Luc2

ATCC® Number	CCL-225-LUC2™
Organism	<i>Homo sapiens</i>
Tissue/Disease Source	Dukes' type C, colorectal adenocarcinoma
Product Description	<p>This luciferase expressing cell line was derived from HCT-15 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"> • Signal noise ratio: $\geq 1,000$ • Bioluminescence: $\geq 100,000$ 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 <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

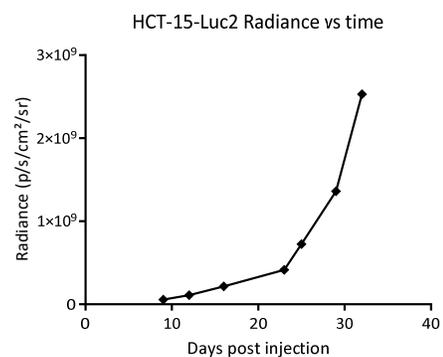
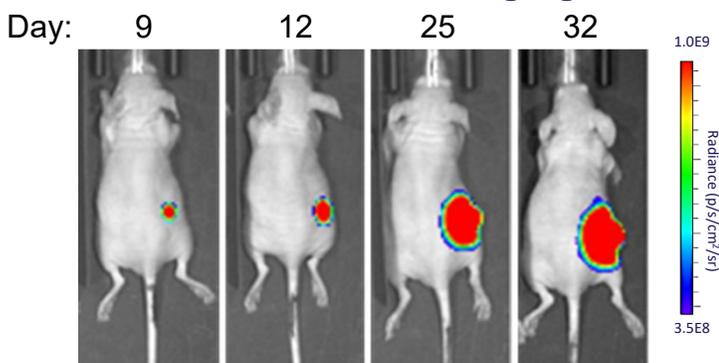


Figure 1: *In vivo* detection of luciferase activity of HCT-15-Luc2. HCT-15-Luc2 cells (3×10^6) were injected subcutaneously into the dorsal region near the thigh of female Nu/Nu mice. Tumor growth was monitored weekly using a Xenogen IVIS Spectrum. *In vivo* bioluminescence imaging demonstrated the progression of tumors.

Cell Morphology

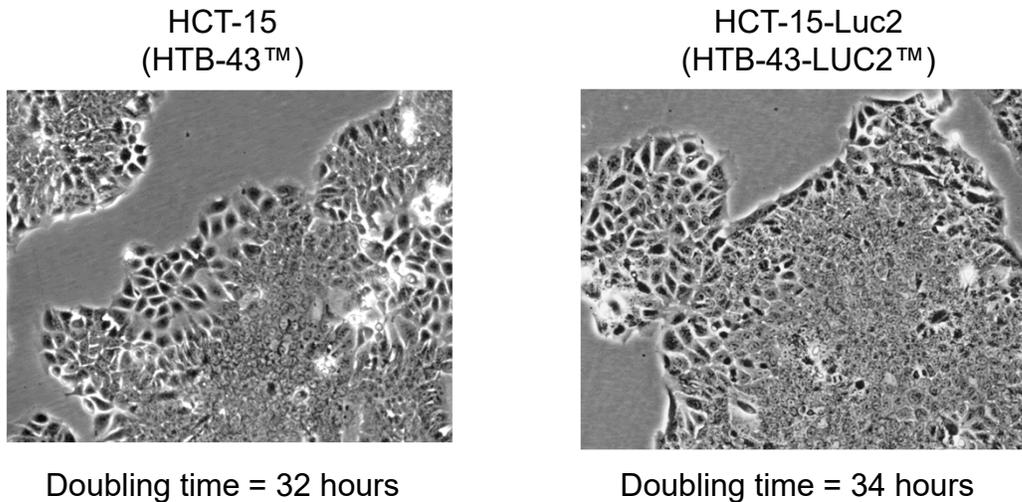


Figure 2: Cell morphology of HCT-15 parental and HCT-15-Luc2. Cells were maintained in ATCC recommended culture conditions. Cell morphology was observed under microscopy and images were captured by digital camera.

Luciferase Expression

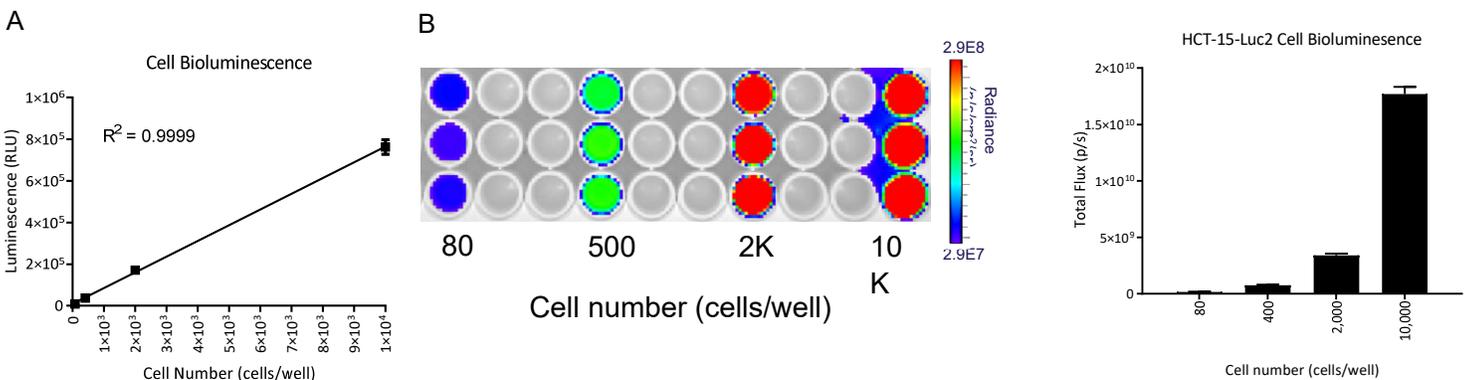


Figure 3: Linearity of luminescence and of *in vitro* quantification of luciferase activity of HCT-15-Luc2. Cells were seeded in a 96-well plate at indicated cell numbers per well, and Bright-Glo (Promega) was added to the indicated wells. The luminescence of the plate was read within 10 minutes using 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.