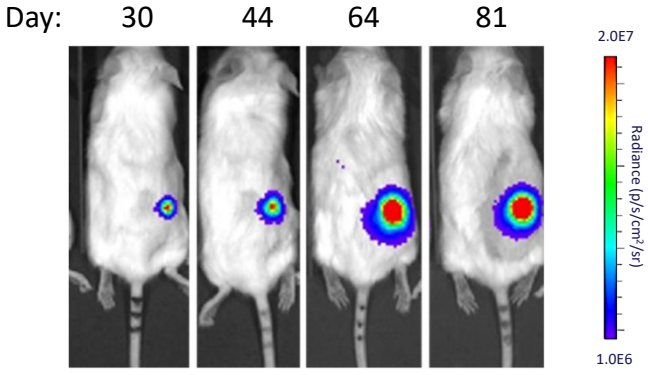
ATCC® | Credible leads to Incredible™

Technical Data Sheet: LNCaP clone FGC-Luc2

ATCC® Number	CRL-1740-LUC2™
Organism	*Homo sapiens*
Tissue/Disease Source	Metastatic prostate adenocarcimoma
Product Description	This luciferase expressing cell line was derived from LNCaP clone FGC cell line by transduction with lentiviral vector encoding firefly luciferase gene (luc2) and subsequently through single cell cloning. • Signal noise ratio: ≥ 1,000 • Bioluminescence: ≥ 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 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



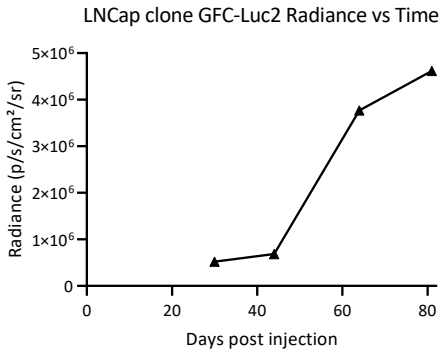
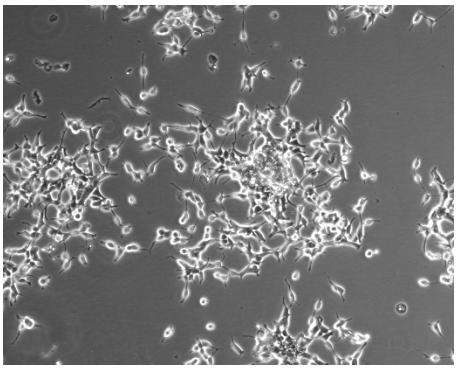


Figure 1: *In vivo* detection of luciferase activity of LNCaP clone FGC-Luc2. LNCaP clone FGC-Luc2 cells ($3x10^6$) were injected subcutaneously into the dorsal region near the thigh of female NSG mice. Tumor growth was monitored weekly using a Xenogen IVIS Spectrum. *In vivo* bioluminescence imaging demonstrated the progression of tumors.

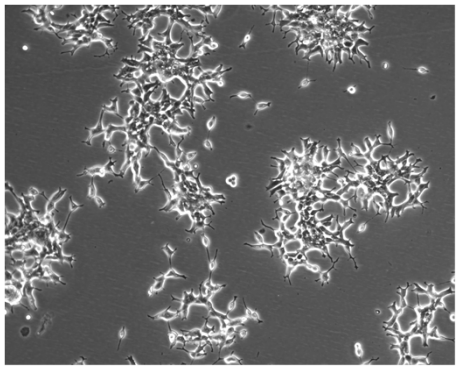
Cell Morphology

LNCaP clone FGC
(CRL-1740™)



Doubling time = 38.6 hours

LNCaP clone FGC-Luc2
(CRL-1740-LUC2™)



Doubling time = 40.8 hours

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

Luciferase Expression

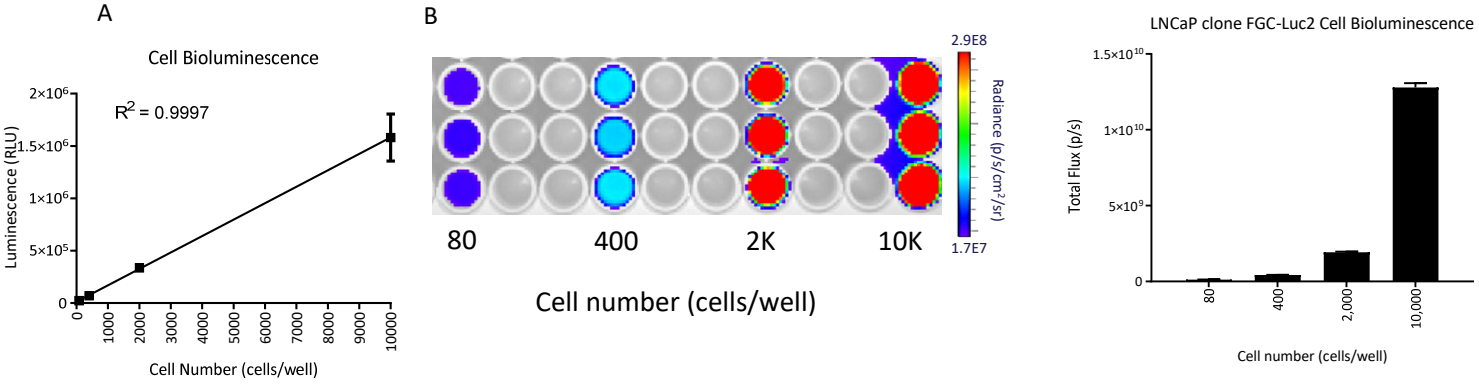


Figure 3: Linearity of luminescence and of *in vitro* quantification of luciferase activity of LNCaP clone FGC-Luc2. Cells were seeded in a 96-well plate at indicated cell numbers per well, and Bright-Glo (Promega) was added to the indicated wells. The luminescence of the plate was read within 10 minutes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