**Designation:** LNCaP-luc-M6  
**Tissue:** Human; prostate; metastatic site: left supravacular lymph node; carcinoma  
**Bioluminescence In Vitro:** Approximately 2-4 photons/sec/cell. Exact number will vary depending on imaging and culturing conditions  
**In Vivo Models Tested:** Nu/nu (CR): subcutaneous–NOT recommended; SCID-bg (CR): subcutaneous–multiple metastasis orthotopic–multiple metastasis  

### The Features
Caliper Life Sciences Bioware Cell Line Models Offer the Ability to:
- Monitor early tumor development  
- Monitor tumor growth and metastasis in vivo  
- Quantify tumor burden in the whole animal  
- Follow responses to therapeutic treatments non-invasively in longitudinal studies using the same cohorts of mice.

### Murine Pathogen Free
All Caliper Life Sciences cell lines are confirmed to be pathogen free by the IMPACT Profile I (PCR) at the University of Missouri Research Animal Diagnostic and Investigative Laboratory.

### Model Description
LNCaP-luc-M6 is a luciferase expressing cell line that was derived from LNCaP human adenocarcinoma cells by stable transfection of the North American Firefly Luciferase gene expressed from the CMV promoter. This cell line can be used in vivo to establish:
- Subcutaneous tumors models  
- Subcutaneous tumors models with metastasis (SCID)-bg mice  
- Orthotopic prostate tumor model

### Subcutaneous Tumor Growth–SCID-beige Mice Representative Mouse No. 2.5 Dorsal View
![Figure 1. Increased tumor bioluminescence was detected as early as three weeks after implantation and the bioluminescent signal continued to rise over the course of the experiment. Tumors were measurable by caliper as of week 7 and increases in mean tumor volume paralleled the increases detected in mean bioluminescence with a correlation of R²=0.78.](image-url)

### References

*Includes data specifically related to LNCaP-luc-M6 cells. 

### Credits
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Orthotopic Tumor Growth – SCID-beige Representative Mouse No. 6.4 Ventral View

Figure 3. Starting one week after implantation, mice were imaged once a week for 16 weeks. Data shown is representative of 2 experiments where tumor take was 4/8 and 22/24 respectively. At each time point, the bioluminescence of LNCaP-luc-M6 tumors from four mice was measured and is reported in photons/second (ph/s). Increases in tumor bioluminescence were detected as early as 4 weeks after implantation and the bioluminescent signal continued to rise over the course of the experiment. (Exp #089, n=10 male [CR])

Spontaneous Metastases: Subcutaneous Model – SCID-beige Representative Mouse No. 2.5

Figure 2. Mice were imaged on their ventral side, and primary tumors were shielded in order to detect low signals from secondary metastases. Selected tissues were analyzed by ex vivo imaging and processed for subsequent histology. Spontaneous metastases occurred in animals with subcutaneous LNCap-luc-M6 tumors and were confirmed by histopathology. (Exp #090, n=8 male [CR])

Spontaneous Metastases from Orthotopic Tumors – LNCaP-luc-M6, 1x10^6 cells, prostate, after implantation and the bioluminescent signal continued to rise over the course of the experiment. (Exp #089, n=4/8 male [CR])

LNCaP-luc-M6 cells (1x10^6) were injected into the prostate of male SCID-beige mice. Mice were imaged on their ventral side, and primary tumors were shielded in order to detect low signals from secondary metastases. Selected tissues were analyzed by ex vivo imaging and processed for subsequent histology. Spontaneous metastases occurred in animals with orthotopic LNCap-luc-M6 tumors and were confirmed by histopathology. (Exp #088 n = 4/8 male [CR])

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Contact Information:
If you have any questions regarding these cell lines, please contact Caliper at 508-497-6592 or e-mail: reagents@caliperls.com.
Spontaneous Metastases: Subcutaneous Model – SCID-beige Representative Mouse No. 2.5

Figure 2. Mice were imaged on their ventral side, and primary tumors were shielded in order to detect low signals from secondary metastases. Selected tissues were analyzed by ex vivo imaging and processed for subsequent histology. Spontaneous metastases occurred in animals with subcutaneous LNCaP-luc-M6 tumors and were confirmed by histopathology. (Exp #090, n=10 male [CR])

Orthotopic Tumor Growth – SCID-beige Representative Mouse No. 6.4 Ventral View

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Spontaneous Metastases from Orthotopic Tumors – LNCap-luc-M6, 1x10^6 cells, prostate, SCID-beige Representative Mouse No. 6.4

Figure 4. LNCap-luc-M6 cells (1x10^6) were injected into the prostate of male SCID-beige mice. Mice were imaged on their ventral side, and primary tumors were shielded in order to detect low signals from secondary metastases. Selected tissues were analyzed by ex vivo imaging and processed for subsequent histology. Spontaneous metastases occurred in animals with orthotopic LNCap-luc-M6 tumors and were confirmed by histopathology. (Exp #088 n = 4/8 male [CRI])

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