

➤ Metastasizing tumor models

Implantation of tumor cells into the organ of origin (“orthotopically”) allows organotypical interaction between tumor cells and surrounding stroma. In addition, it has been shown that tumor cells can spread to metastatic sites in other organs, with specificities comparable to the human situation. However, it must be emphasized that while in most orthotopically implanted in vivo models metastasis can occur it is uncontrolled and heterogeneous.

A liver metastasis model is an alternative way to examine spread of colon cancer specifically to the liver. Cells inoculated via the spleen followed by splenectomy offer an alternative xenograft model for studying colon metastases that involves transit of the cells via the blood stream into the liver.

➤ LOVO_luc/GFP cells

LOVO is a human colorectal cancer cell line derived from a metastatic tumor nodule in the left supraclavicular region of a 56-year-old male with adenocarcinoma of the colon. Luciferase and GFP overexpressing LOVO_luc/GFP cells were sourced from Creative Biolabs to detect and monitor the growth of orthotopically implanted cells.

➤ In vivo bioluminescence measurement

After surgery, the growth of the LOVO_luc/GFP tumor cells and potential metastatic loci are monitored via in vivo bioluminescence imaging (BLI) in NSG mice.

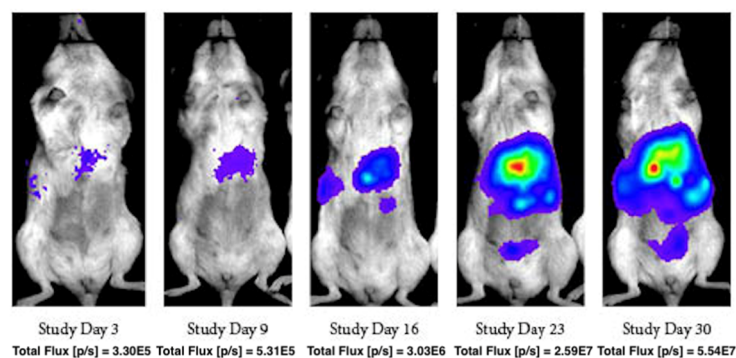


Figure 1: In vivo BLI. LOVO_luc/GFP tumor growth in representative NSG mouse was monitored once a week using BLI.

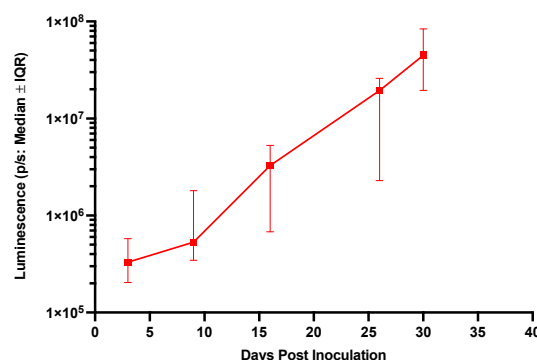


Figure 2: Median in vivo Bioluminescence (Total Flux [p/s]) for Group During the Study

➤ Study example

If you are interested in receiving information on potential positive controls please reach out to our Business Development team at requests@reactionbiology.com.