Lung tumor model: LL-2
syngeneic – intra-splenic – metastasis

IN VIVO TESTING SERVICES

➢ Metastasizing tumor models

In metastatic tumor models, tumor spread either originates from a primary tumor or is often artificially induced by intravenous or intracardiac injection of tumor cells. In this case, the tumor cells are injected into the spleen and migrate from there to the liver. After removal of the spleen, the tumor cells grow as metastasis in the liver. For human tumor cell lines immune-compromised mice are used with the advantage to study classical antitumoral test compounds. In contrast, murine tumor cell lines can be grown in immune-competent mice (syngeneic), providing a functional immune system to assess novel immunotherapeutic approaches.

➢ Tumor cell line LL-2_Luc

Origin: mouse 57BL/6
Description: Lewis lung carcinoma

➢ Study outline

LL-2_Luc cells are injected into the spleen and migrate from there to the liver. Tumor cell growth is monitored via in vivo bioluminescence imaging (BLI). The animals are randomized into treatment groups according to the luminescence signal. During the study, metastasis is monitored via BLI once per week, animal behavior is monitored daily and animal weights are measured three times per week.

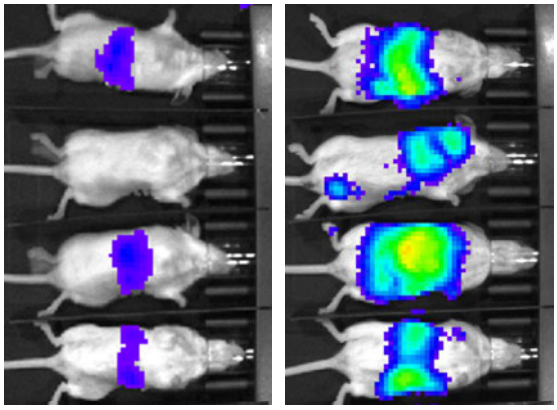

Figure 1: *In vivo BLI of mice with Intra-splenic injected LL-2_Luc cells were measured 2 days (left) or 13 days (right) after implantation.*

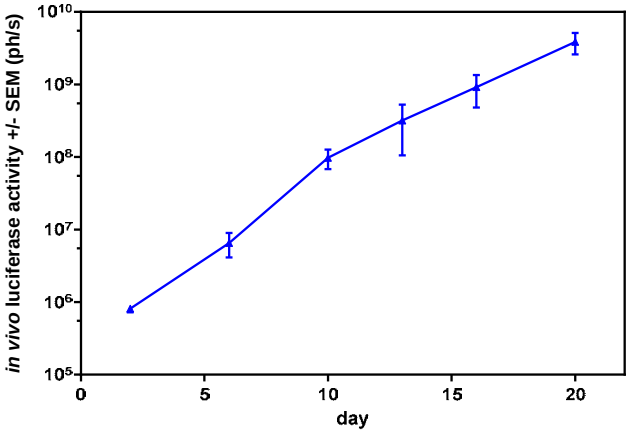

Figure 2: *In vivo BLI of LL-2_Luc cells growing as liver metastasis tumors in vivo, luciferase activity, mean values +/- SEM*

➢ Quality assurance

- Routine authentication of tumor cell lines by STR profiling
- Mycoplasma testing of tumor cells by PCR just prior to implantation
- Routine health monitoring of sentinel animals (according to FELASA guide lines)
- Animal work according to the 5R rules (reduce, refine, replace, responsible, remember)

Note: Graphs depicted are derived from study examples. Each study is a biological system of its own and subject to intrinsic variation.