

➤ Orthotopic tumor models

Implantation of tumor cells into the organ of origin (“orthotopically”) allows organotypical interaction between tumor cells and surrounding stroma. It has been shown that this interaction affects growth, differentiation, and drug sensitivity of tumor cells. Moreover, tumor cells can spread to metastatic sites in other organs, with specificities comparable to the human situation. However, it must be emphasized that in most orthotopically implanted *in vivo* models using typical immortalized cell lines metastasis occurs but is very heterogeneous and not detectable in all animals after implantation. Reaction Biology created more reliable *in vivo* models to address intentions aiming mainly at metastasis. Nevertheless, analysis of the primary tumors of orthotopically implanted cancer cells gives us a very prospective read out when testing a new compound.

➤ SW620 cells

Human SW620 cells were isolated from a patient with a colorectal adeno-carcinoma, from a lymph node as metastatic site.

As routine quality controls, the cells are regularly checked for Mycoplasma contamination and authenticity (via STR DNA Typing).

➤ Tumor growth *in vivo*

During surgery, tumors cells are implanted into the caecum, a part of the colon compartment. Thereafter tumor growth is monitored via *in vivo* bioluminescence imaging (BLI).

Tumor growth is monitored via BLI once weekly.

Animal weights are measured three times weekly.

Animal behaviour is monitored daily.

All mice are maintained in separated isolated housing at constant temperature and humidity.

Accessory services: tumor wet weight and volume measurement at necropsy, blood sampling, flow cytometry, paraffin embedding of tumor tissue, histological & pathological analysis, cytokine determination, provision of tumor tissue for target validation.

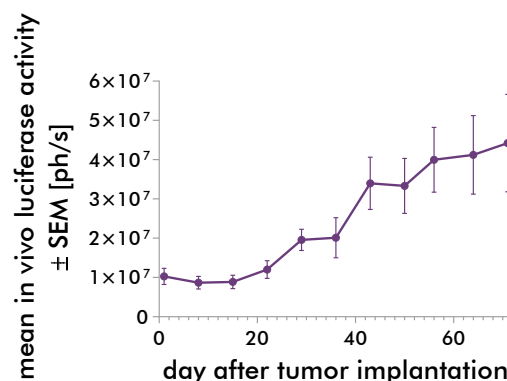


Figure 1: Tumor growth of SW620 cells after orthotopic implantation *in vivo*. Tumor volume, mean values \pm SEM. N=10

➤ 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.