MOLM-13: Subcutaneous AML xenograft tumor model

IN VIVO PHARMACOLOGY

➢ Subcutaneous mouse tumor models

Subcutaneously implanted tumor cells represent a convenient means to test novel potential anticancer drugs *in vivo*. A large variety of human and murine cell lines derived from both, solid tumors or leukemias, covering a wide range of tumor geno- and phenotypes, have been adapted to grow in a murine host, and thus allow testing of a compound in the appropriate tumor model.

➢ MOLM-13 cells

Human MOLM-13 cells were isolated from a patient with AML (acute myeloid leukemia) and express heterozygously an internal tandem duplication (ITD) mutation of the FLT3.

A Hematoxylin-Eosin stained paraffin section of a subcutaneous MOLM-13 xenograft is shown on the right. As routine quality controls, the cells are regularly checked for Mycoplasma contamination and authenticity (via STR DNA Typing).

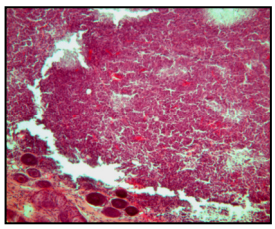

Figure 1: *Hematoxylin-Eosin stained paraffin section of a subcutaneous MOLM-13 xenograft*

➢ Expression of oncology relevant proteins

CD15 +, FLT3 +
Expression data using western blotting and immunohistochemistry are available for a selection of protein kinases. For information, please inquire!

➢ Tumor growth *in vivo*

MOLM-13 cells harvested from tissue culture flasks are implanted into the subcutaneous space of the left flank of the mice. Resulting tumors are monitored by calipering twice 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.

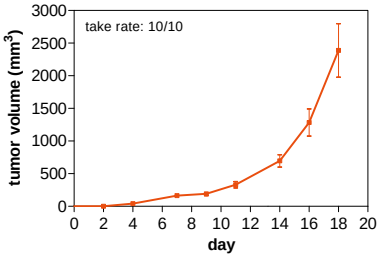

Figure 2: *Tumor growth of MOLM-13 cells in a subcutaneous xenograft in vivo, tumor volume, mean values +/- SEM*

➢ Study example

In the study shown here, one Group of mice bearing subcutaneous MOLM-13 xenografts was treated with VX-680, the other Group with Vehicle only.

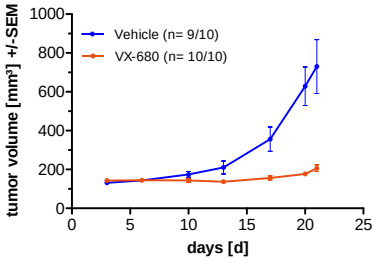

Figure 3: *Effect of VX-680 on subcutaneous tumor growth of MOLM-13 in vivo*