::REACTION BIOLOGY

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> ## Mouse-derived isograft tumor models (MDI)

Today, cancer research tends to focus on development of novel cancer immunotherapies. While classical syngeneic mouse models are based on the implantation of cultured cell lines, Reaction Biology's mouse-derived isograft (MDI) tumor models make use of tumor tissue that has been propagated in mice with a very low number of passages. Hence, the major advantage of these novel and unique spontaneous-derived or carcinogen-induced MDI tumor models is the preservation of primary tumor phenotype and intratumoral immune cell populations.

> ## Tumor tissue JA-2041

Origin: sarcoma / murine
Description: 3-Methylcholanthren induced
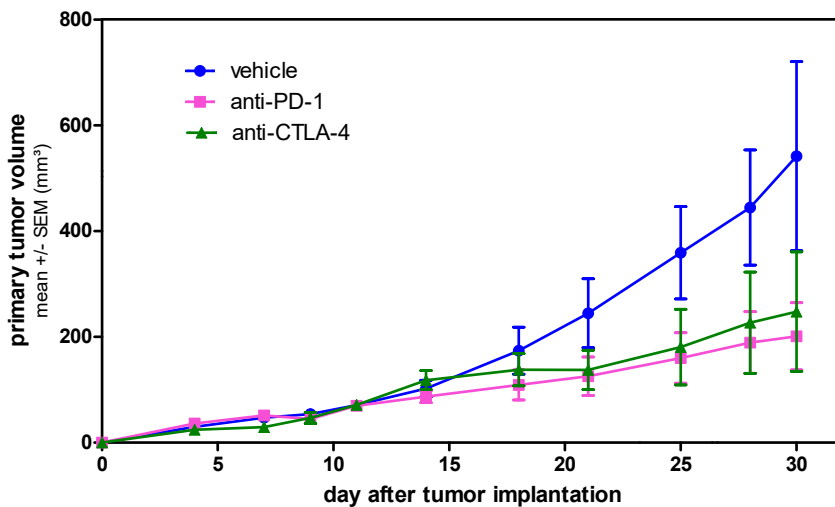Source: Reaction Biology GmbH

> ## Study example

Figure 1: *JA-2041 tumor growth when treated with anti-PD-1 and anti-CTLA-4 antibodies monitored by calipering*

> ## Reference compounds tested

Anti-PD-1:   moderate antitumoral response
Anti-CTLA-4:   moderate antitumoral response

> *please turn over* ◄

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➢ **Flow cytometry**

Flow cytometry enables the characterization of immune cell populations. Hence, changes in these populations by immune-modulating therapies give insight in their mode of action. Established standard staining panels for T lymphocytes, macrophages and myeloid-derived suppressor cells are offered. In addition, custom-tailored staining panels are established upon requested. The unaffected phenotype of immune cell populations of the described model is depicted.
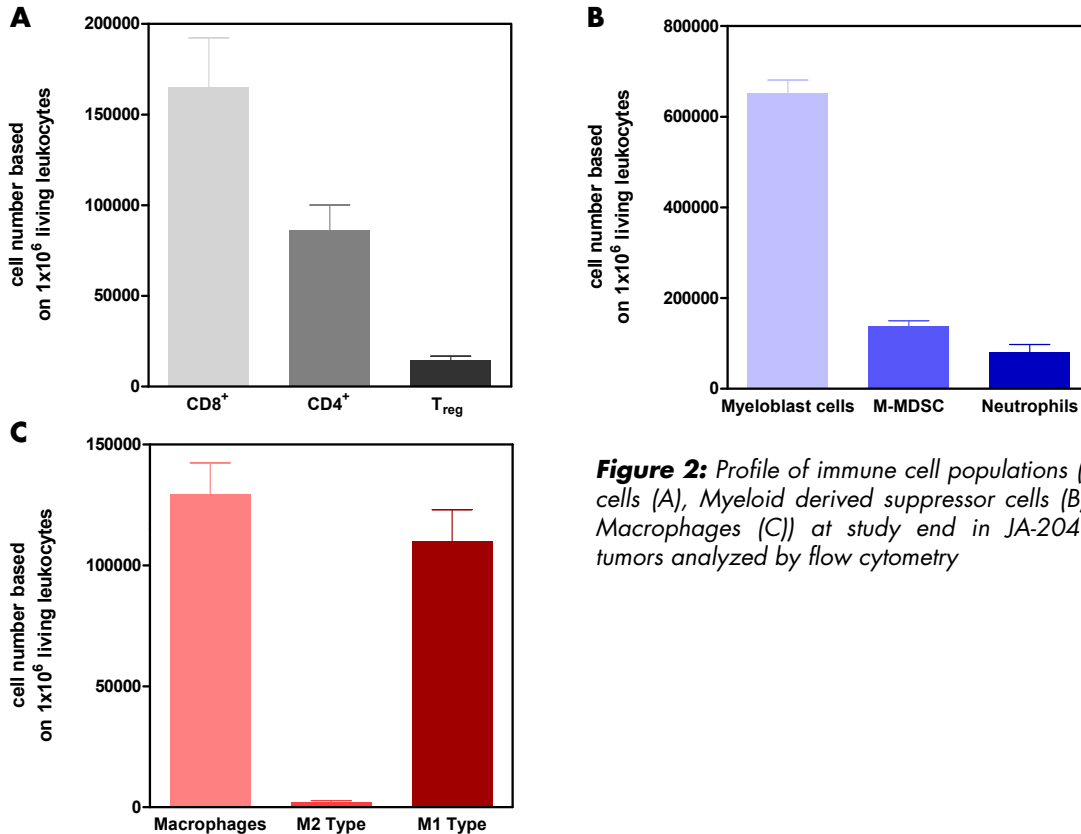

Figure 2: *Profile of immune cell populations (T cells (A), Myeloid derived suppressor cells (B), Macrophages (C)) at study end in JA-2041 tumors analyzed by flow cytometry*

➢ **Quality assurance**

• Routine health monitoring of sentinel animals (according to FELASA guide lines)
• Adherence 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.