

Center of Innovation and Preclinical Studies

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ONCOLOGY

Orthotopic xenograft tumor model

Orthotopic xenograft tumor models assessed in immunodeficient mice. In this model human cancer cells are orthotopically implanted into the target organ of nude mice¹.

Species: Mus musculus (Nude athimic nu/nu

NU(NCr)-Foxn1^{nu})

Number of animals/group: At least 8

animals/group

Route of administration: upon request

Treatment mode: upon request Target organ: upon request

Main Read-outs: Body weight, tumor volume and weight, images of animals, images of tumors and survival rate.

Facultative read-outs: PK/PD, histopathology, immunohistochemistry, RT-PCR analysis of biomarker messenger RNA, hematology and others.

Validation Data

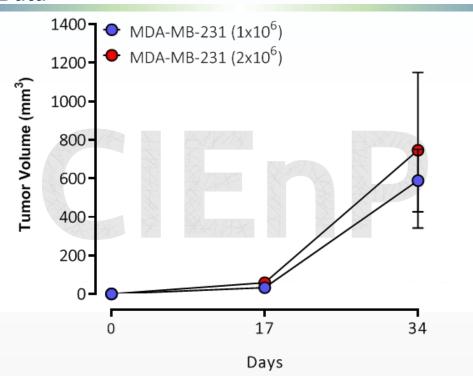


Figure: Tumor volume for MDA-MB-231 (human brest cancer) cells inoculated $(1x10^6 \text{ or } 2x10^6)$ into the breast of female nude mice. Each point represents the mean \pm SEM of 3 mice.

To avoid bias and to allow reproducibility all in vivo experiments follow the ARRIVE guidances². Mouse colony from Charles River Laboratories is breed and maintained in SPF conditions. The project includes study plan and final report. Raw data are inspected by quality assurance unity. The experimental procedures was previously approved by the CIEnP Committee on the Ethical Use of Animals.

References:

Paschall, A. V., Liu, K. An Orthotopic Mouse Model of Spontaneous Breast Cancer Metastasis. J. Vis. Exp. (114), e54040, doi:10.3791/54040 (2016).

²Kilkenny C, Browne WJ, Cuthill IC, Emerson M, Altman DG. Animal research: reporting in vivo experiments: The ARRIVE guidelines. PLoS Biol. 8 (6): e1000412, 2010.

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