Model Name
Xenograft, Pancreas, Orthotopic, MIA PaCa-2

Item Number
581501

Introduction
The MIA PaCa-2 orthotopic human pancreatic carcinoma xenograft model is used to evaluate therapeutic efficacy of investigational antineoplastic agent(s) in immune compromised mice.

Procedure Summary
Groups of eight (8), specific-pathogen-free (SPF) female nu/nu or NOD/SCID mice bred in an animal isolator (IVC racks) under SPF conditions at 22 ± 2°C are used. Viable human pancreatic carcinoma MIA PaCa-2 (ATCC CRL-1420) cells are surgically injected into the pancreas head of anesthetized experimental mice. Dose administrations are initiated one week post tumor cell inoculation (Day 1). Body weights and health observations are recorded daily for the first five days post tumor cell implantation, and then twice weekly over the course of the study period. Additionally, mice are monitored by abdominal palpation twice weekly starting on Day 1 for the development of pancreatic tumors. Study will continue for “n” days. Therapeutic efficacy may be evaluated by survival and/or primary tumor weight.

Suggested Testing
Median overall survival (OS) in days of test article treated group(s) compared to negative control. Photographs are taken of pancreas and primary tumor pre and post excision.

Endpoint Parameters
Animal body weight increase greater than 35%, or 60 days post tumor cell implantation date, whichever comes first. Animal morbundity and/or abdominal palpation of primary tumor mass exceeding 2000 mm³.

Study Parameters
Primary tumors are excised and weighed (g). Primary tumor weights of test article treated groups are compared to negative control.

Optional Services
• In Vitro cell proliferation
• MTD determination
• PK and bio-analysis for plasma and tumor
• Clinical chemistries and CBC data collection
• Continuous infusion dose administration (osmotic pump)
• Tumor and organ sampling

Literature

Related Assay  (Item # - Assay Name)
581521 - Xenograft, Pancreas, Orthotopic, Bx-PC3
581541 - Xenograft, Pancreas, Orthotopic, PANC-1

Modified Protocols
We will readily accommodate client-specified alterations.
Laboratory
These assays are performed at our AAALAC accredited laboratory in Taipei.

Animal Welfare
All aspects of this work is performed in general accordance with the Guide for the Care and Use of laboratory animals (National Academy Press, Washington, DC, 2011). The study protocol was approved by the Pharmacology Discovery Services IACUC and is performed with the oversight of veterinarians to assure the humane treatment of laboratory animals.

Therapeutic Response Data

One-way ANOVA followed by Dunnett’s Multiple Comparison Test were applied for comparison between the naïve groups and tumor-cell implanted groups of the same strain (*p<0.05).

Last modified February 5, 2019