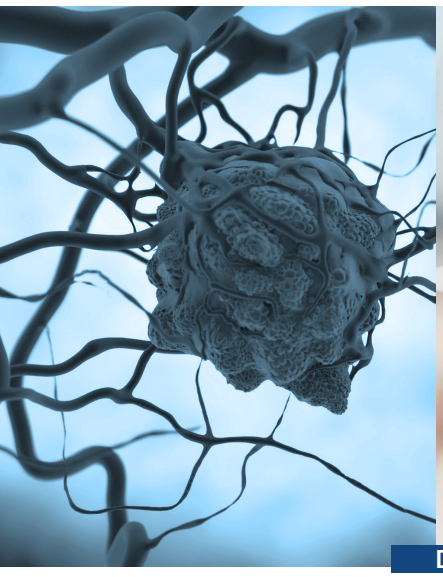
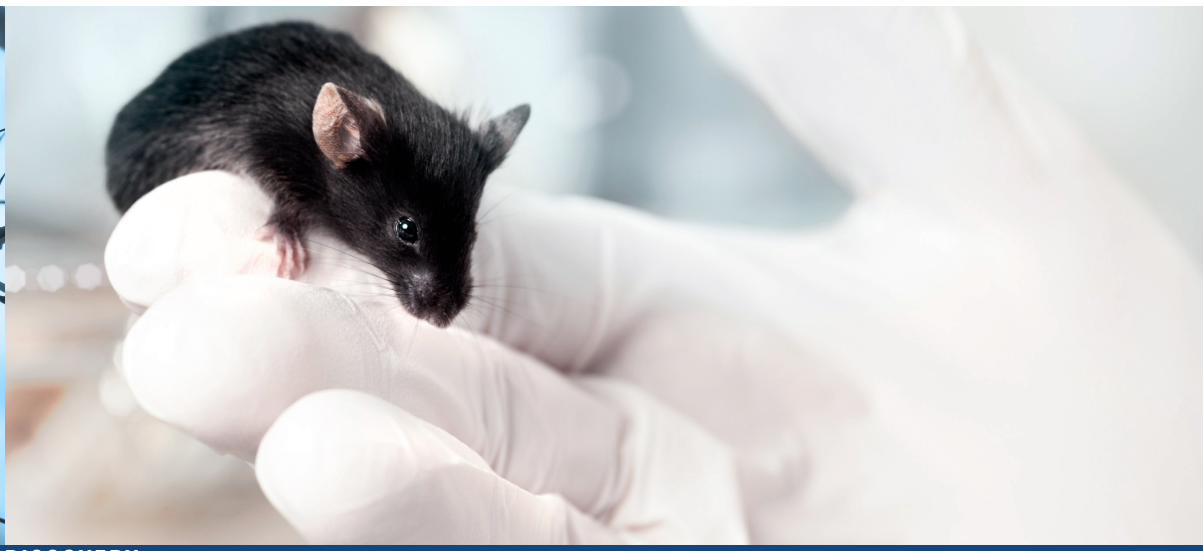
charles river





DISCOVERY

Syngeneic Models for Oncology Research

Why Charles River?

- Over 15 years experience with these models
- More than 1000 syngeneic studies completed
- Over 20 models validated
- WES data for most models
- SOC data for known immune checkpoint inhibitors
- Imaging endpoints
- Multiparameter flow cytometry analysis

With the growing interest in exploring immunology as a cancer therapy, the use of conventional xenograft models in immunocompromised animals presents challenges. A more effective approach is the use of syngeneic mouse models utilizing immunocompetent mice bearing tumors derived from the strain of origin. These models serve as surrogates for human patients, and allow us to study how cancer therapies perform in conjunction with a functional immune system. Additional advantages include the availability and low cost of host animals, ease of model validation and setup, reproducibility of data, and the ability to monitor the immune system's response to treatment.

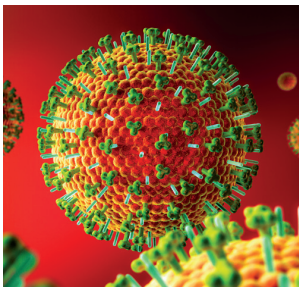
Charles River offers a broad range of syngeneic mouse models in a number of histotypes in subcutaneous, systemic, and orthotopic formats. Representative data describing the response to standards of care (SOC) is available and multiple clones of immunotherapeutic antibodies directed against CTLA-4, PD-1, and PDL-1 have been characterized. Additionally, whole exome sequencing (WES) and analysis has been completed for most of our models and is available to assist in proper selection of studies.

Murine Tumor Models

Histotype	Cell Line
Bladder	MBT-2
Breast	4T1, EMT-6
Colon	Colon26, CT26, MC38
Hepatoma	Yoshida
Leukemia	C1498, L1210, P338
Lung	KLN 205, Lewis Lung, Madison109
Lymphoma	A20, E.G7-OVA, EL4

Histotype	Cell Line
Mastocytoma	P815
Melanoma	B16F10, CloudmanS91
Pancreatic	Pan02
Plasmacytoma	J558
Renal	Renca
Sarcoma	EHS

EVERY STEP OF THE WAY



Highlights

- Profile immune cell populations
- Analyze compound effects on immune cell populations
- Custom assay panels available

Flow Cytometry Adds Another Dimension to Immuno-oncology Study Designs

Our in-house multiplex flow cytometry capabilities compliment syngeneic tumor model studies and enables a comprehensive analysis of the immune system, allowing identification of various cell populations and deep interrogation of an immune response elicited from novel therapeutics.

We have validated panels of flow assays for identification and profiling of several relevant immune cells, such as CD4+ and CD8+ effector T cells, helper and regulatory T cells, myeloid-derived suppressor cells, macrophages and natural killer cells. Additionally, we routinely work with clients to generate customized panels to identify specific immune cells critical to a particular program. Any of these panels, standard or custom, measured in combination with traditional biomarkers and other endpoints tailored to the program, help to build a complete data package.

With a streamlined process for tissue dissociation, cell isolation, staining and acquisition, systemic and tumor-infiltrating immune cells can be processed rapidly to give clients the flexibility of reviewing data and making quick decisions about compounds and studies.

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