

# Syngeneic Models/ Immuno-oncology

Immuno-oncology (IO) is a rapidly evolving treatment modality that is designed to harness the patient's immune system to fight cancer. **Axis Bio** can provide 14 validated models covering 8 cancer types to access the immuno-therapeutic potential of your agents.

## Axis Bio ADVANTAGE:

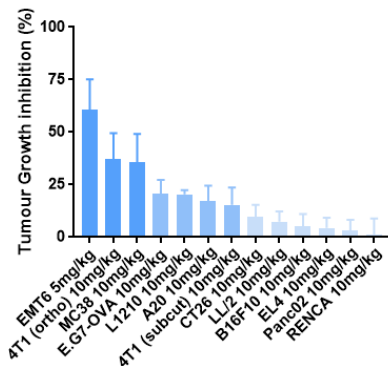
1. Using our benchmarking data and extensive experience, we can help you choose the most appropriate model and checkpoint inhibitor for your studies.
2. FACS-based immunoprofiling to quantify treatment-induced immune cell subpopulation changes.
3. Quantification of metastatic spread by direct counting or bioluminescent imaging.
4. Option for a range of post-study tissue processing for downstream analyses: frozen, formalin-fixed, paraffin-embedded.
5. Option for post-study haematological and/or biochemical analysis.

## Syngeneic Models

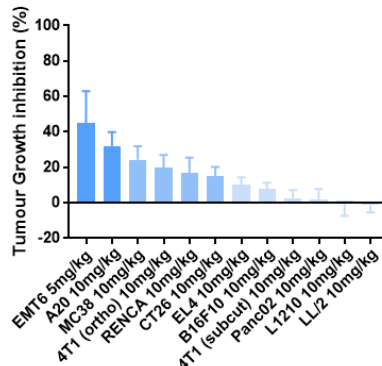
<b>Breast</b>	4T1, EMT6
<b>Colon</b>	Colon26, CT26, MC38
<b>Leukaemia</b>	EL4, L1210
<b>Lung</b>	Lewis Lung
<b>Lymphoma</b>	A20, E.G7-OVA B16F10,
<b>Melanoma</b>	CloudsmanS91
<b>Pancreatic</b>	PANC02
<b>Renal</b>	RENCA

## Checkpoint inhibitor efficacy data

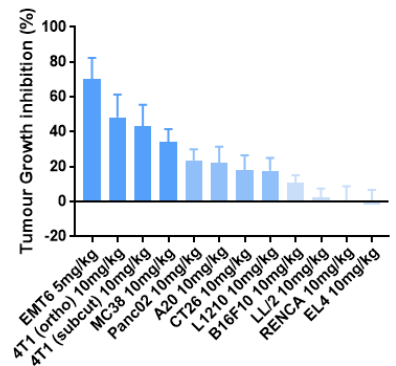
Axis Bio has profiled our syngeneic panel for response to checkpoint inhibitors (Figures 1-3 show waterfall plots for our panels treated with anti-PD1, anti-PDL1 and anti-CTLA4 antibodies).



**Figure 1** - Anti-PD1 antibody efficacy in Axis Bio syngeneic models. RMP1-14 clone used. Data shown is mean (SD).



**Figure 2** - Anti-PDL1 antibody efficacy in Axis Bio syngeneic models. 10F.9G2 clone used. Data shown is mean (SD).



**Figure 3** - Anti-CTLA4 antibody efficacy in Axis Bio syngeneic models. 9D9 clone used. Data shown is mean (SD).

## Combination efficacy data

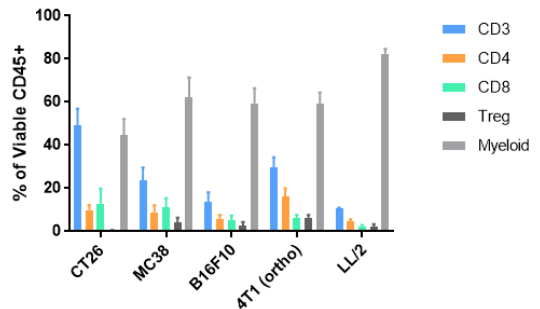
Axis Bio has profiled many of our syngeneic models with standard-of-care chemotherapy agents in combination with checkpoint inhibitors; please contact us for further information on specific models.

# Syngeneic Models/ Immuno-oncology

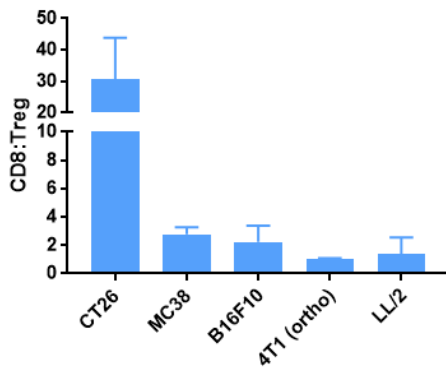
## Immune Cell sub-populations in syngeneic tumours

Axis Bio has validated protocols for tissue processing, staining and FACS analysis of tumour tissue. Panel design for individual populations are detailed below. Example data for our most widely used models are shown in Figure 4.

Target Population	Gating Strategy
Tregs	CD45+, CD3+, CD4+, CD25+, FoxP3
Activated CD8	CD45+, CD3+, CD8+, CD69+
MDSC	CD45+, CD11b+,
TAM	CD45+, CD11b+, Ly6C-, Ly6G-, F4/80+
B-cells	CD45+, CD19, B220
NK cells	CD45+, CD3-, CD11b-, CD56, CD49b, NK1.1



**Figure 4** - Basal level of immune cell sub-populations in our most widely used syngeneic models. CD3, CD4, CD8, Treg and myeloid cells expressed as a percent of viable CD45+ cells.



**Figure 5** - Basal level of CD8:Treg cells in our most widely used syngeneic models

### CD8:Treg

The balance of T effector CD8+ cells to regulatory T-cells (CD3+, CD4+, CD25+, FoxP3+) is important in response to therapy, with an increased value indicating a favourable treatment response.

## Value Add-ons

- Many of our syngeneic models spontaneously develop metastases; these nodules can often be directly counted on the organ surface e.g. lung, liver.
- Additionally, specific organs can be homogenized and metastatic cells counted using a modified clonogenic assay.
- For some syngeneic models we have bioluminescent sub-clones that can be used with an IVIS imaging apparatus, to monitor metastatic spread longitudinally during the study.
- We have a range of post-study analyses available to assess target engagement and downstream physiological effects e.g. western blotting, ELISA, FACS, IHC.
- To assess potential toxicity of your therapeutic agent, we can carry out complete blood counts and/or biochemical analyses.

Factsheets with specific model details and optional extras are available, please contact us at [info@axisbio.co.uk](mailto:info@axisbio.co.uk) for further information or a quote.