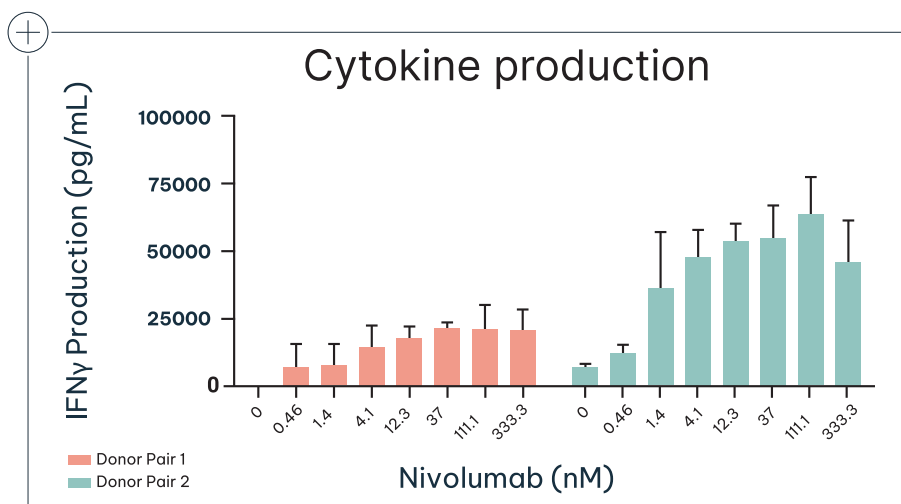


Discover our *in vitro* Mixed Lymphocyte Reaction (MLR) models

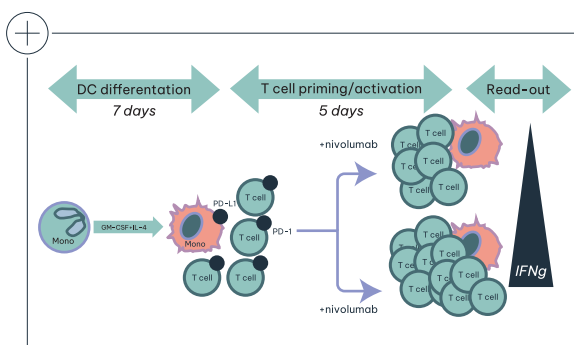
Our assay employs **pre-screened human T cells** co-cultured with antigen presenting cells (APCs); most commonly monocyte derived dendritic cells (mo-DC) to assess allogenic T cell responses due to their major histocompatibility complex-peptide (pMHC) mismatches. T cell responses, namely proliferation and cytokine production can be **enhanced by checkpoint blockade** and compared directly to your therapeutic candidate. Responses can be measured by a refined, one-way MLR format or by a simultaneous two-way MLR. Boost your data package by adapting our MLR assays to answer your questions.



Assay set-up

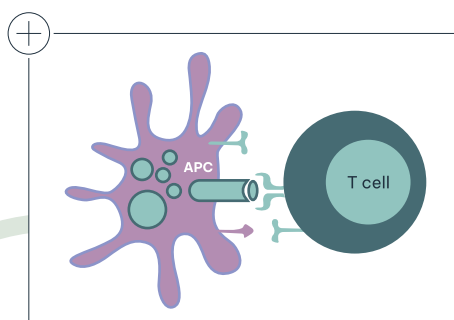
One-way MLR

Our one-way MLR allows for a simplified uni-directional assay response. This defined system is achieved by differentiating dendritic cells from monocytes to create moDCs from one donor, and incubating these with pan-T cells (CD3+) from a 2nd, HLA-mismatched donor. T cell proliferation is measured by flow cytometry of the responding population only.



Two-way MLR

Our two-way MLR allows for both stimulator and receptor populations from both donors to be measured simultaneously. This is achieved by mixing PBMCs from two HLA-mismatched donors, and measuring the overall responses. Typically T cell proliferation levels (flow cytometry) and cytokine production



The model is a medium throughput, flexible assay set-up ideal for MoA assessment of:



Checkpoint inhibitors



Modulators of T cell signalling and/or function



Co-stimulation agonists



Kinase inhibitors



Bispecifics / T cell engagers



Immunometabolism modulators

Why choose **RoukenBio's** *in vitro* MLR models?



Nivolumab benchmarked assay

Checkpoint inhibition enhances T cell proliferation and cytokine production in a one-way MLR. Nivolumab is used in every run as an internal benchmark control.



Pre-screened human T cell donors

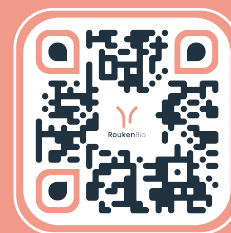
To maximise assay success, we screen T cell donors in advance, at no additional cost to you, to guarantee alloreactive MLR pairings that can be enhanced by Nivolumab (PD-1 inhibition).



High content assay readouts

Phenotype and function are measured using a combination of multi-parameter flow cytometry and multiplex cytokine readouts. 96-well plate formats provide a medium throughput assay with up to 720 testing wells per run.

Find out more by downloading our MLR technical presentation and access example data:



RoukenBio - The CRO redefined

Backed by our brilliant minds, we have turned the traditional CRO model on its head, by fostering a collaborative and personalised approach. Our mission is simple:

Solve problems. Deliver quality data. Propel your drug discovery breakthroughs.

United by a passion to make sense of complexities and overcome challenges, we apply our specialised knowledge to big-picture thinking. We will explore every option to deliver over and above for your project.

We are thought leaders with a deep understanding of immunology, bioassays, molecular biology and a track record of groundbreaking discoveries and novel cell-based tools.