
Bioanalytical Solutions for Immuno-oncology Therapeutics



Global leaders in specialist
biomarker and bioanalysis
research services.

Bioanalytical Solutions for Immuno-oncology — Therapeutics

Cancer remains one of the most complex and difficult to treat diseases and is a leading cause of death worldwide. Advances in the understanding of the immune systems holds great promise for treatment solutions.

Synexa Life Sciences is a specialist in complex biomarker and bioanalytical assay development, execution and interpretation, providing bespoke assay solutions in an integrated, science driven and quality-orientated approach.

Our expertise in the field of immunology and immune-based analytical technologies makes us the perfect partner in advancing immuno-oncology therapeutic pipelines.

Several approaches are currently being investigated in the immuno-oncology space, focusing on using the already existing immune mechanisms to treat the tumour, with particular emphasis being placed on:

- **Monoclonal antibodies**
- **Checkpoint inhibitors**
- **CAR-T cell therapies**
- **Immunomodulatory therapies**

We have validated assays for the assessments of each of these and novel modalities as well as the required expertise for custom development and validation of bespoke assays, from a wide array of matrices spanning the biological continuum.

**SOLUTIONS THAT SERVE AT THE
FOREFRONT OF THERAPEUTIC
DEVELOPMENT**

IO Services

We use innovative approaches and validated platforms to answer client-specific questions for quality, clinically-relevant data.

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Target Engagement

Assessment of target engagement quantifies the effects of the therapy on the immune system, providing integral early insight into the therapeutic's activity, saving time and money on molecules with less than optimal engagement.

Expression of Pharmacology

Data obtained to quantify the effects of the immune system on the malignancy is best studied in an integrated manner by utilizing biomarkers from across the biological continuum, from DNA through to tissue.

Flow Cytometry Services

A crucial tool in our arsenal of investigative technologies, flow cytometry is a mainstay of our immuno-oncology therapy assessments

Synexa Life Sciences is positioned at the forefront of the rapidly expanding field of flow cytometry, offering up to 28-colour panels, led by leaders in the field with decades of experience and supported by robust and proven technology platforms, harmonised across our strategically located labs to support our global client base with quality, scientifically sound clinical data.

We are fully capable of managing samples through the complete analytical cycle, with dedicated project, logistics and sample management policies.

Immuno-profiling & Phenotyping Assays

- Lymphocytes (TN, TH, TFH, Treg, TEF, TEM, TCM, NK and B cells)
- Dendritic cells (DCs)
- Monocytes
- Macrophages
- Myeloid-derived suppressor cells (MDSCs)
- Multimers
- Intracellular staining
- Treg polarization assessment

Target engagement/PK/PD Assays

- Receptor Occupancy assays
- Phospho-flow assays
- Polyamine uptake assessment
- SARS-CoV-2 immune response assessment
- Flow cytometry-based PK assessment.

Functional Assays

- Cytokine expression
- Cytotoxic markers
- Activation markers
- Proliferation assays
- Basophil degranulation
- Rare cell detection and quantification
- Antibody-dependant cellular cytotoxicity (ADCC)
- Complement-dependant cytotoxicity (CDC)
- Small particle detection and analysis
- ELISpot assays



Case Study Applications

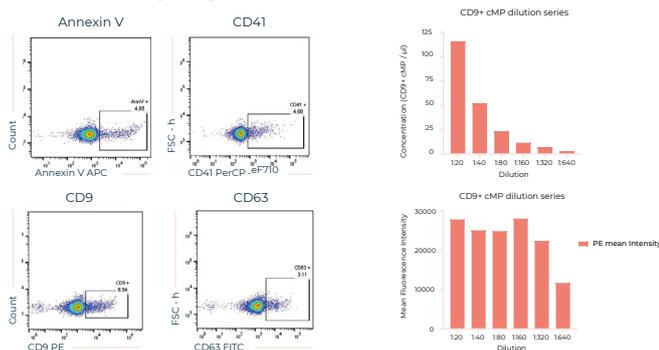
Platelet-derived circulation microparticles

(cMP) Detection of cMPs expressing Annexin V, CD41, CD9 or CD63

Immunophenotyping: Rare event analysis

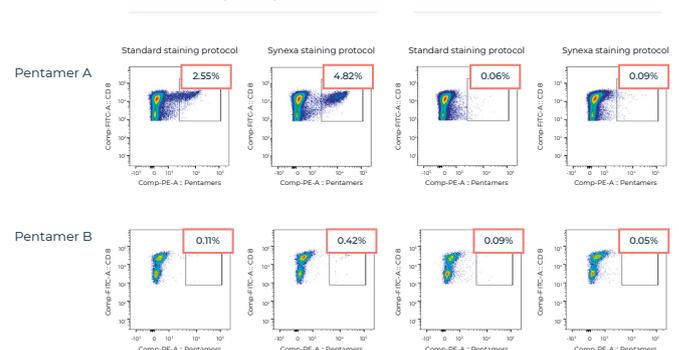
Detection of antigen specific vaccine responses using pentamers

Detection of cMPs expressing Annexin V, CD41, CD9 or CD63



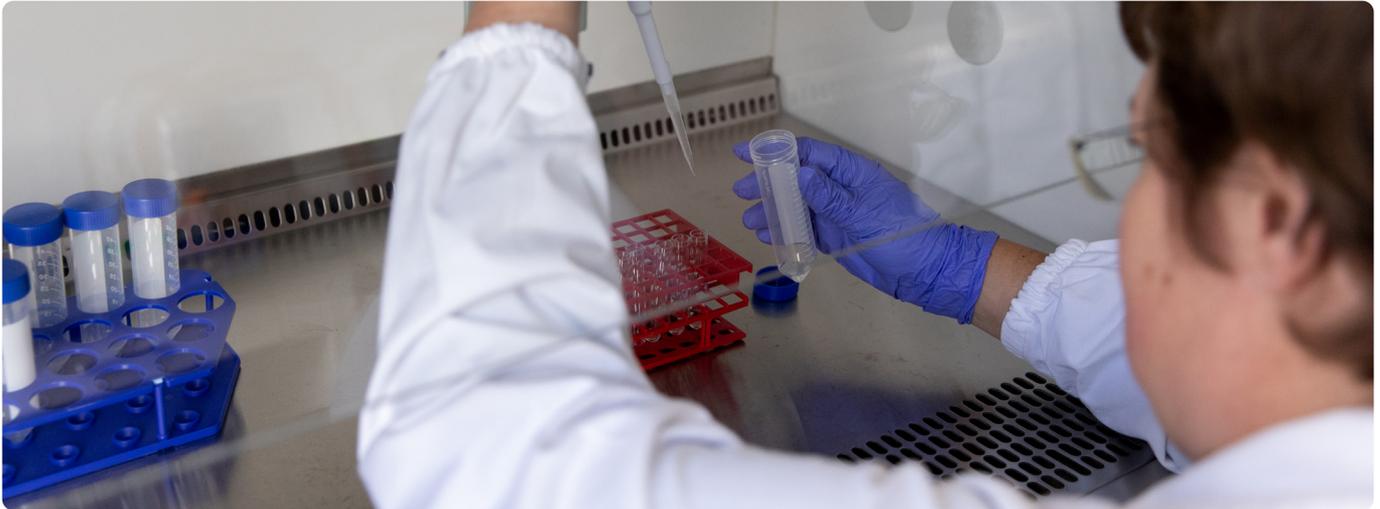
Vaccine specific pentamers

Pentamers controls





Our Biomarker & Bioanalytical Services



Synexa specializes in providing bespoke end-to-end biomarker and bioanalytical solutions, developed and validated to meet your specific challenges.

✓ **Pre-clinical/ ProtoTrials®**

- Biomarker selection & strategy
- Functional in vitro testing

✓ **Soluble Biomarkers**

- Cytokines & Chemokines
- Complement assays
- Serology
- Auto-antibody profiling
- Customised immunoassays
- LC/MS

✓ **Tissue**

- Histopathology, IHC & FISH
- NanoString

✓ **Clinical Bioanalysis**

- Pharmacokinetics
- Immunogenicity

✓ **Genetic**

- Sequencing & PCR
- Tumour immunosensitivity
- Microbiome profiling
- Immunogenomics

✓ **Cellular**

- Immunophenotyping
- Polyfunctionality
- RO assays
- Cellular avidity

✓ **Data Analytics & Insights**

- Integrated immunological insights
- Complex biosignatures & stratification

✓ **Novel Modality Bioanalysis**

- Gene therapy bioanalysis
- Exosome bioanalysis
- Cell therapy bioanalysis



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