
Bioanalytical Solutions for Immuno-oncology Therapeutics



Global leaders in
specialist biomarker
and bioanalysis
research services

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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.

Our validated and physiologically-relevant assay formats are developed to the highest standard and according to regulatory guidelines to assess:

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, T_H, T_{FH}, T_{reg}, T_{EFF}, T_{EM}, T_{CM}, NK and B cells)
- Dendritic cells (DCs)
- Monocytes
- Macrophages
- Myeloid-derived suppressor cells (MDSCs)
- Multimers
- Intracellular staining
- T_{reg} 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.

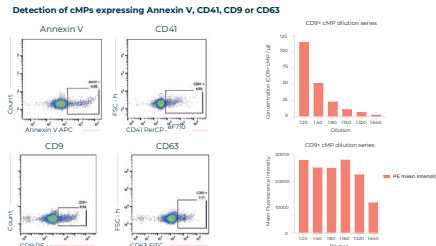
Functional Assays

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

Case Study Applications

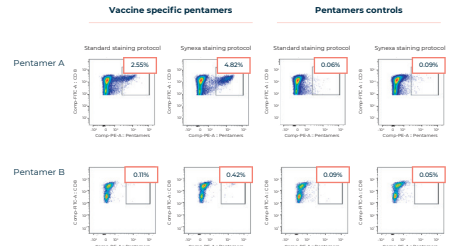
Platelet-derived circulation microparticles (cMP)

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



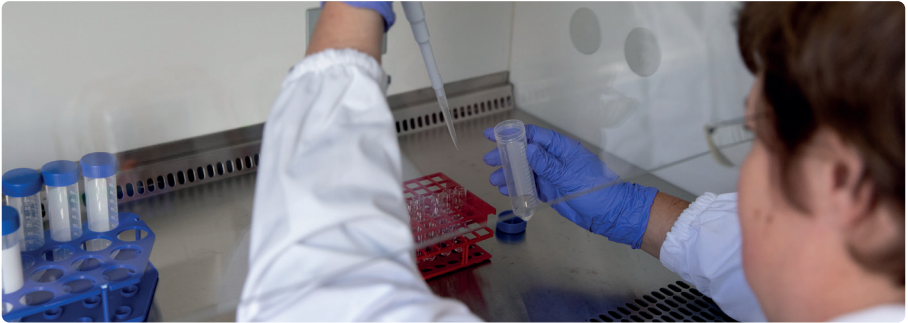
Immunophenotyping: Rare event analysis

Detection of antigen specific vaccine responses using pentamers





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

✓ Genetic

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

✓ Soluble Biomarkers

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

✓ Cellular

- Immunophenotyping
- Polyfunctionality
- RO assays
- Cellular avidity

✓ Tissue

- Histopathology, IHC & FISH
- NanoString

✓ Data Analytics & Insights

- Integrated immunological insights
- Complex biosignatures & stratification

✓ Clinical Bioanalysis

- Pharmacokinetics
- Immunogenicity

✓ Novel Modality Bioanalysis

- Gene therapy bioanalysis
- Exosome bioanalysis
- Cell therapy bioanalysis



Global Laboratory & Business Sites

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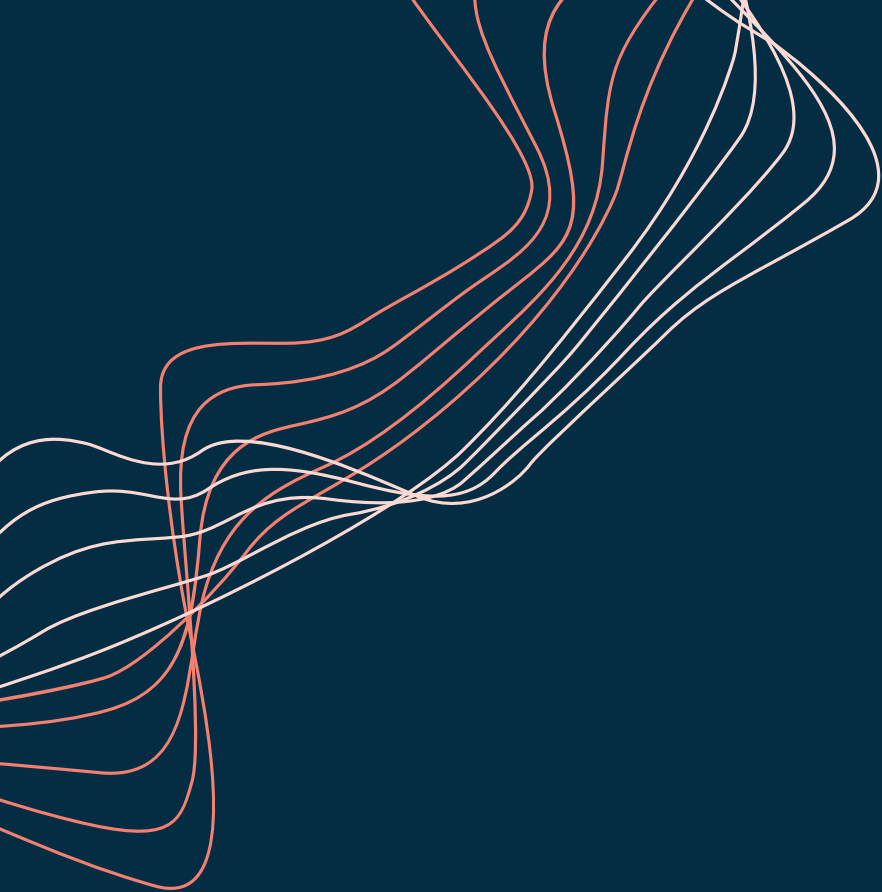
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