

## Analytical Services for Vaccine Development

Analytical and bioanalytical methods are essential in vaccine development, ensuring safety, efficacy, and quality at every stage. These techniques offer vital insights into the product's identity, purity, stability, potency, and safety. They are pivotal in assessing immune responses during both preclinical and clinical phases and in upholding strict quality control during manufacturing. By enabling precise characterization and evaluation, these methods facilitate the creation of vaccines that adhere to rigorous regulatory standards and effectively address global health challenges.

### Our Expertise

Take advantage of our expertise in genomics, proteomics, and immunoassays and let Avance Biosciences support your vaccine development and manufacturing campaigns. We assist clients with all vaccine types, including mRNA vaccines. Explore our comprehensive service offerings, categorized into preclinical studies, clinical studies, and Chemistry, Manufacturing, and Controls (CMC). Our tailored analytical solutions are crafted to accelerate each stage of vaccine development, ensuring rigorous testing for safety, efficacy, and quality assurance.

### Analytical Support through ALL Stages of Product Lifecycle

Phase	Technologies	Applications
Development	qPCR, ddPCR, PCR, Flow Cytometry, ELISA, MSD, LC/MS/MS	<ul style="list-style-type: none"> <li>Raw material testing (i.e., plasmid release testing)</li> <li>Sequence confirmation</li> <li>Product characterization</li> </ul>
Preclinical Studies	Cell-Based Assays, qPCR, ddPCR, PCR, Flow Cytometry, ELISA, MSD, LC/MS/MS	<ul style="list-style-type: none"> <li>Immunogenicity studies</li> <li>Cytokine profiling</li> <li>PK/PD studies</li> <li>Biodistribution studies</li> </ul>
Clinical Studies	qPCR, ddPCR, PCR, Flow Cytometry, ELISA, MSD, LC/MS/MS	<ul style="list-style-type: none"> <li>Immunogenicity Testing</li> <li>Biomarker Analysis</li> <li>PK/PD studies</li> <li>Patient stratification</li> <li>Cytokine profiling</li> </ul>

## Analytical Support through ALL Stages of Product Lifecycle

Phase	Technologies	Applications
CMC Support	qPCR, ddPCR, PCR, Flow Cytometry, ELISA, MSD, LC/MS/MS	<ul style="list-style-type: none"><li>• Identity assays</li><li>• Characterization assays</li><li>• Batch consistency testing</li><li>• Host cell proteins</li><li>• Host cell residual DNA</li><li>• Potency assays</li><li>• Stability studies</li><li>• Compendial methods</li><li>• Adventitious agent testing</li></ul>

Scan to learn more.

