

# COMPLEMENT SYSTEM

EXPLORE EVERY ANGLE OF THE COMPLEMENT SYSTEM



**Discuss your project with our scientists today**  
- let's develop the future of life science together!

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**YOUR ANALYTICAL TOOLBOX**  
**COMPLEMENTING LIFE SCIENCE**

SCIENTIFIC KNOWLEDGE & ADVANCED TECHNOLOGIES

# WE'RE COMPLEMENTING LIFE SCIENCE

## THE COMPLEMENT SYSTEM - A DOUBLE-EDGED SWORD

The complement system, a crucial component of the immune response, serves as a double-edged sword in medicine. While vital for defending the body, its dysregulation can lead to a range of severe diseases, making it a critical target for pharmaceutical intervention. The expanding field of complement therapeutics has driven pharmaceutical companies to develop drugs aimed at fine-tuning this system, given its pivotal role in conditions such as autoimmune disorders, sepsis, neurodegenerative diseases, and graft rejection.

The dual nature of the complement system—both essential and potentially harmful—highlights the need for precise pharmaceutical modulation. As a result, innovative diagnostic and therapeutic tools are becoming indispensable in the ongoing battle against complement-related diseases.

TOOLS FOR

# COMPLEMENT SYSTEM ASSESSMENT

## SOLUTIONS TAILORED TO YOUR NEEDS

With over 20 years of immunoassay expertise within the complement field, Svar has become a trusted partner in the pharmaceutical industry's pursuit of complement-targeting therapeutics. We offer a broad spectrum of solutions tailored to meet the unique demands of drug discovery, assessment, and monitoring.

Our advanced technology platforms and customized service models empower our partners to effectively navigate the complexities of the complement system, facilitating the development of next-generation treatments.

### WHAT WE OFFER

- Wieslab® Functional Assays
- Specific Activation Biomarker Assays
- Cell-Based Activation Functional Assays
- AAV Induced Complement Activation Assays
- Complement Biomarker Services
- Immunogenicity Assessment Services
- Potency / QC Testing

### WHAT IT'S USED FOR

Our solutions are used by pharmaceutical companies, CROs, academic institutions, and clinical laboratories across various applications in drug development, diagnostics, and research for:

- Assessment of complement activation
- Determination of functionality of each individual complement pathway
- Drug candidate screening
- Drug safety measurements
- Potency assessment (lot release)
- Monitoring of biomarkers in clinical trials

## OUR ANALYTICAL TOOLBOX



### Functional & Biomarker ELISAs

Assays to determine the efficacy and potency of complement-targeting drugs. Recommended for biological safety testing and studying complement activation in drug and medical device development.



### Cell-based Reporter-Gene Assays

The *iLite*® reporter gene system offers a functional and biologically relevant assay-ready method to measure drug potency and assess immunogenicity. It is customizable for any target.



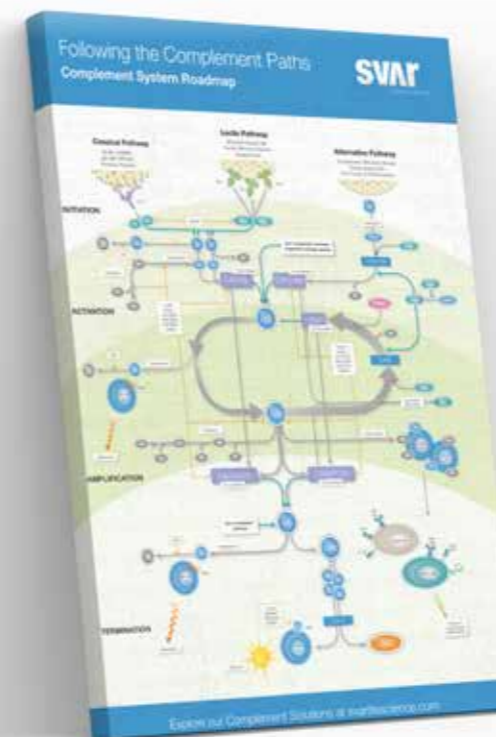
### GxP Laboratory Services

GxP-compliant services (GLP, GCP, GMP) for both new and transferred assays, covering method development, qualification, validation, and continuous improvement throughout the drug development lifecycle.



### Gene Therapy Solutions

Our gene therapy solutions, both cell-based and immunoassays, provide advanced analytical methods for immunogenicity and potency testing, offering custom projects tailored to specific needs delivering truly bespoke assays.



## WANT TO EXPLORE EVERY ANGLE OF THE COMPLEMENT SYSTEM?

With years of experience and deep specialist knowledge in innate immunity, the complement system and its intricate connections, we're here to support your work in research, drug development, and clinical assessment.

Register now to receive your free poster illustrating the complex, hub-like network of complement system pathways.

Scan the QR code to access your free Complement System poster.



ACTIVATION BIOMARKERS

# DETECTION & MONITORING

VERSATILITY & SUPPORTIVE SOLUTIONS

Activation biomarkers are essential for research into: early disease detection, monitoring disease progression, and assessing therapeutic efficacy. They provide valuable insights into the role of complement activation in disorders, helping to determine whether complement system deficiencies, overactivation, or dysregulation are contributing to a condition. These biomarkers are also crucial for comprehensive safety testing. Additionally, they offer a deeper understanding of disease mechanisms, might aid in risk stratification, and may be vital for regulatory compliance in clinical trials.

Our robust and time-efficient activation biomarker assays are designed to reduce hands-on time for the user. They ensure high specificity and reliable detection of complement activation biomarkers across a range of applications.

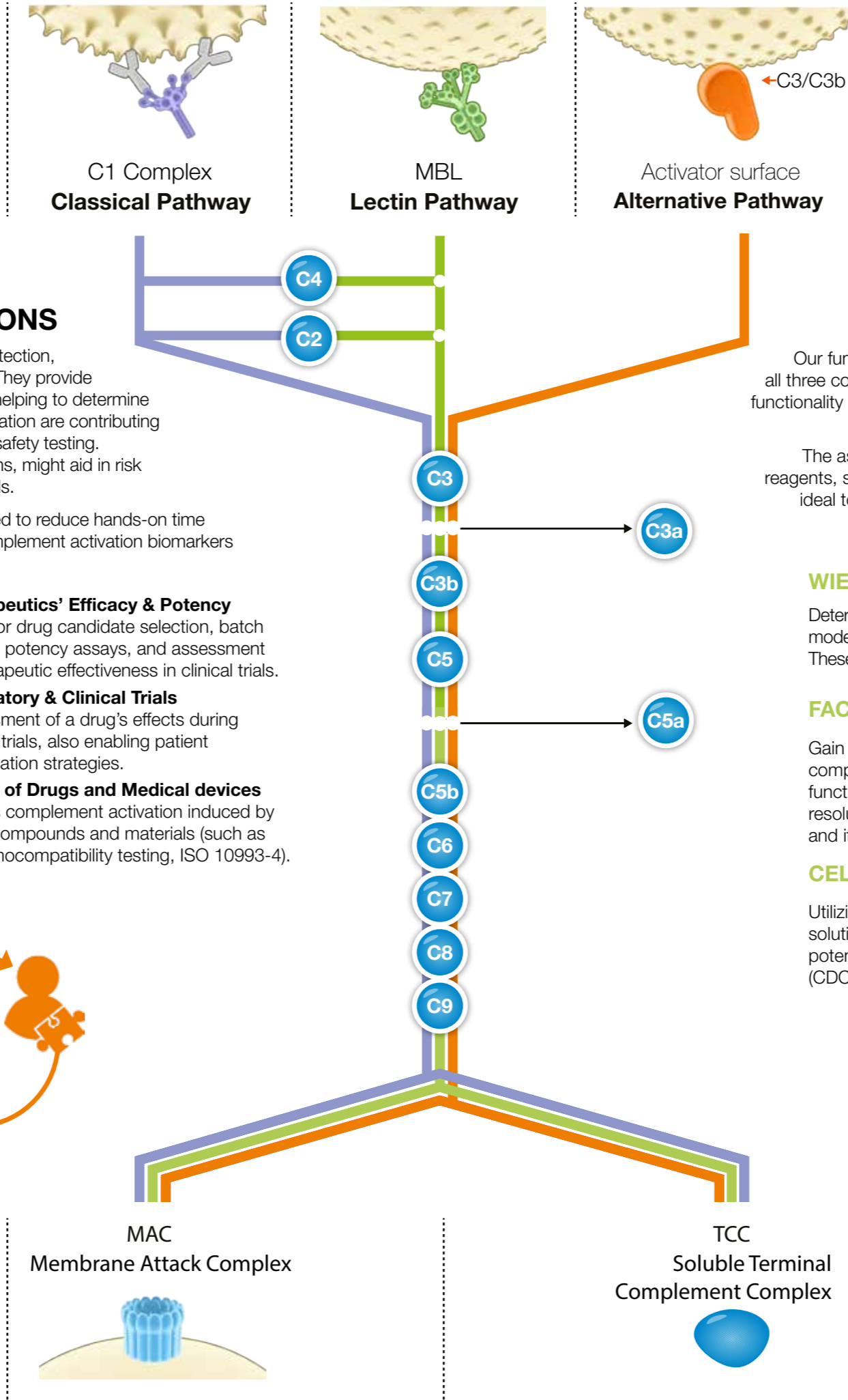
WHAT IT'S USED FOR

- Understanding Mechanisms of Disease**  
 Studies of biomarkers reveal disease mechanisms, and the biomarkers' potential for use in early disease detection. Improved understanding aids in the development and refinement of therapies and may enable timely intervention.
- Characterizing disease models**  
 Supporting researchers by providing real-time insights into disease activity and progression, crucial for developing treatment strategies.
- Therapeutics' Efficacy & Potency**  
 Used for drug candidate selection, batch release potency assays, and assessment of therapeutic effectiveness in clinical trials.
- Regulatory & Clinical Trials**  
 Assessment of a drug's effects during clinical trials, also enabling patient stratification strategies.
- Safety of Drugs and Medical devices**  
 Assess complement activation induced by novel compounds and materials (such as for hemocompatibility testing, ISO 10993-4).

WE CAN HELP NAVIGATE THE COMPLEMENT PATH WITH CONFIDENCE

Our expertise and GxP-compliant services (GLP, GCP, GMP) ensure high-quality, reliable results to support the advancement of complement therapeutics and diagnostic applications.

- CRO Services**—from assay development to validation and optimization.
- Diagnostic testing** - complement system analysis including quantification, measurement, and complement activity screening.
- Custom development** - specialized assays tailored to your research needs, ensuring quality and compliance at every step.



# FUNCTIONAL & QUANTITATIVE COMPLEMENT ASSESSMENT

ANY PATHWAY, ANY LEVEL

Our functional complement portfolio enables the assessment of function across all three complement pathways individually. It can evaluate both normal and altered functionality of the complement cascade, whether through component consumption, dysfunction, deficiency, or active inhibition with therapeutic compounds.

The assays are designed to be flexible and easy to use, featuring ready-to-use reagents, short incubation times, and reduced hands-on time for the user. They are ideal tools for screening and developing complement-modulating therapeutics.

WIESLAB® PATHWAY-SPECIFIC ASSAYS

Determine functional integrity in human, non-human primate, and porcine models with assays that provide reliable loss- and gain-of-function assessments. These assays deliver reproducible data for comprehensive analysis.

FACTOR P ASSAY

Gain insights into the stabilizing effect of Properdin, the only upregulating component of complement activity. This assay's flexible format also enables functional assessment at the C3 convertase level, enhancing experimental resolution in studies focused on the alternative pathway's amplification loop and its components.

CELL-BASED ASSAYS FOR COMPLEMENT

Utilizing *iLite*® reporter gene cell lines, we offer highly customizable cell-based solutions to meet your needs. Whether for functional biomarker assays, potency assays for target inhibitors, or complement-dependent cytotoxicity (CDC), our assays provide precise and adaptable options.

Building on the legacy of Wieslab® assays, Svar continues to advance complement-related solutions that cover every aspect of complement analytics. These solutions are developed by our in-house scientists in collaboration with leading complement experts.

# LET'S EXPLORE THE COMPLEMENT PATH TOGETHER

## DRUG DEVELOPMENT & RESEARCH

Use the same assay throughout the drug development continuum

- Complement inhibitory drug development research
- Screening for new drug compounds targeting different complement proteins
- Determining efficacy and potency of complement-targeting drugs
- Monitoring drug potency and efficacy in pre-clinical and clinical research
- Compatible with a wide variety of open systems, individual research protocols, and automation



## DRUG SAFETY

Ideal for use in drug safety assessments

Use a combination of Complement functional & activation biomarker assays to:

- Determine if a drug candidate induces in vitro complement activation
- Investigate complement activation during toxicological studies and pre-clinical trials
- Identify if the complement system is involved in specific adverse events
- Assess drug safety and risk management needs in pre-clinical and clinical trials

## EASY & OBJECTIVE SOLUTIONS FOR Complement-Directed Drug Discovery & Development

Svar's Complement Solutions offer a comprehensive portfolio of functional and biomarker assays designed to explore all facets of complement system involvement across a wide range of applications.

Our assays and technologies are uniquely developed to assess various aspects of the complement system and support the discovery, development, and evaluation of complement-targeting therapeutics

## CLINICAL PHASE

We provide solutions for long-term drug and patient monitoring

- Detect complement deficiencies in patients
- Analyze all three complement pathways independently using an ELISA assay
- Compatible with ELISA robots for high-throughput screening, surpassing the efficiency of traditional hemolytic methods



## HEMOCOMPATIBILITY

We help provide safer medical devices

- Explore complement activation due to biomaterial exposure as a critical immunogenic area
- Assess the impact of therapeutic interventions to complement activation
- Determine activation pathway using specific complement activation biomarker assays
- Predict potential adverse reactions from medical devices (e.g., grafts, stents, hemodialysis, cardiopulmonary bypass), biological drugs, and nanomedicines
- Ensure reliability of data for clinical evidence using functional complement assays
- Use functional complement assays to ensure data quality and clinical relevance
- Assess complement activation in accordance with ISO standard 10993-4

