



BIOVIA BIOTHERAPEUTICS WORKBENCH

Many research organizations are increasing efforts on biotherapeutics discovery and development, focusing on antibodies as the predominant therapeutic class of interest. The process of discovering antibodies typically involves analyzing and screening thousands of antibody candidates which are then optimized and rescreened to identify the best candidates to move forward into development.



Figure 1: Early antibody discovery

There are several common challenges inherent in early antibody discovery:

- Dedicated tools enabling you to process and understand high volume antibody sequence data are lacking, forcing you to write custom tools, attempt to repurpose existing systems or fall back on spreadsheets
- Data is siloed and in different locations, making it difficult for you to analyze sequence annotation and activity data together
- The developability of candidate antibodies is typically assessed late in discovery rather than early on when considerable cost savings can result from eliminating or flagging problematic candidates for action
- With constantly evolving scientific methods, it is hard to rapidly configure software to keep pace with changing workflow needs

The BIOVIA Biotherpeutics Workbench is a lightweight, easy-touse web application developed in collaboration with numerous companies engaged in antibody discovery. The Workbench helps you understand your antibody data more easily, so you can identify promising therapeutic antibody candidates more efficiently.

OVERCOME BARRIERS TO INNOVATION AND PROCESS EFFICIENCY

What if you could:

- Save time assembling relevant sequence and assay information for biologics candidate review?
- Improve scientific insight and decision-making to more easily identify promising biologic candidates?
- Reduce the cost and number of experiments performed by calculating important properties early in the discovery process?

The BIOVIA Biotherapeutic Workbench enables computation experts and bench molecular biologists alike to save time, reduce errors and improve innovation.





Figure 2: Viewing an aligned set of sequences and associated developability data in the BIOVIA Biotherapeutics Workbench. By following the guided workflow you can easily import and analyze sequence and activity data to identify promising candidates for further investigation.

WHAT THE BIOVIA BIOTHERAPEUTICS WORKBENCH DOES

The BIOVIA Biotherapeutics Workbench enables you to analyze high volume candidate antibody sequences and associated data by following a guided workflow. With the BIOVIA Biotherapeutics Workbench, you can:

- Rapidly import and annotate large numbers of antibody sequences, including Fab, ScFv and custom entities
- Analyze antibody activity and characterization data
- Cluster antibodies into groups based on sequence information and other properties
- Calculate a variety of developability properties
- Leverage a graphically rich user interface to more easily understand your data
- Register candidate antibodies directly in BIOVIA Biological Registration

The BIOVIA Biotherapeutics Workbench enables you to bring all of your data together so that you can triage antibody sequences to more easily identify and select optimal candidates for further investigation and analysis.

WHO BENEFITS

The BIOVIA Biotherapeutics Workbench enables biotherapeutics discovery team biologists to carry out experiments, analyze data more efficiently, generate high-quality results, and leverage these to more easily evaluate the quality of antibody candidates for further investigation and optimization.

The BIOVIA Biotherapeutics Workbench equips the biotherapeutics discovery team with a powerful set of tools to more efficiently and effectively identify antibody candidates that meet specific quality criteria for promotion into development.

EXAMPLE WORKFLOW

Developed for ease of use, the BIOVIA Biotherapeutics Workbench enables biotherapeutic research scientists to follow a guided workflow to understand and evaluate candidates as shown in Figure 3. The workflow will be configurable by expert developers.

To learn more about our solutions, go to **biovia-biologics.com**



Figure 3: Example BIOVIA Biotherapeutics Workbench workflow

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