



Biointron Integrates Gene-to-Data Workflow for AI Antibody Discovery

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RushData connects gene synthesis, 1-day CHO expression, and high-throughput antibody assays in one workflow, returning structured experimental datasets for AI-driven discovery programs.

AI-driven antibody discovery platforms can generate hundreds to thousands of candidate sequences in a single design cycle. Turning those sequences into experimentally validated data, however, requires coordination across gene synthesis, antibody expression, purification, binding assays, developability testing, and data processing?creating a wet-lab bottleneck between computational design cycles.

Biointron Biological USA Inc. ("Biointron"), a contract research organization specializing in antibody discovery, production, and characterization, developed RushData to connect those steps into a single high-throughput gene-to-data workflow.

At the center of RushData is Biointron's 1-day transient CHO expression workflow, which enables rapid

progression from synthesized antibody sequences to assay-ready material. For early-stage screening, antibodies can be evaluated directly at the supernatant level, reducing the need to wait for purification before generating initial expression and binding data. Combined with high-throughput processing of more than 3,000 antibody molecules per batch, this approach enables experimental datasets to be generated on a timescale better aligned with rapid AI design?build?test?learn cycles.

RushData is organized into three service levels based on the depth of experimental characterization required.

Basic provides rapid supernatant-level screening, including expression titer and binding measurements, allowing large candidate panels to be evaluated early in the discovery process.

Standard adds antibody purification and more detailed affinity characterization using technologies such as bio-layer interferometry (BLI) or surface plasmon resonance (SPR).

Premium extends characterization into early developability assessment, including differential scanning fluorimetry for thermal stability, affinity-capture self-interaction nanoparticle spectroscopy (AC-SINS) for self-interaction, and polyspecificity reagent-based testing for polyreactivity.

Together, these assays generate multidimensional experimental profiles that can help researchers identify candidates with favorable combinations of expression, binding, affinity, and developability characteristics rather than prioritizing molecules on binding performance alone.

RushData results can also be delivered as structured datasets and accessed through an API, allowing research teams to integrate wet-lab measurements directly into internal dashboards, computational models, or automated antibody discovery pipelines.

Chinese Hamster Ovary, or CHO, cells are widely used for therapeutic antibody production because they support protein folding and post-translational modifications relevant to biopharmaceutical development. Using CHO expression during early experimental validation can therefore provide AI discovery teams with data generated in a mammalian expression system relevant to later-stage antibody development.

Biointron has delivered recombinant antibody production and characterization services to more than 3,000 biotechnology and pharmaceutical organizations across more than 20 countries, with offices in Cambridge, Massachusetts, and Piscataway, New Jersey, alongside its China-based facilities. The 1-day CHO workflow extends a service line the company already uses across its RushMab small-scale antibody expression packages, applying the same expression platform to the higher-throughput, data-generation use case that AI antibody design programs require.

About Biointron

Founded in 2012 and certified to ISO 9001:2015, Biointron is a CRO specializing in antibody discovery, expression, and optimization services for biotech and pharmaceutical companies. From gene sequence to purified antibodies, our production takes only 2 weeks ? and with RushData, our AI antibody wet lab validation service, computational predictions become experimentally confirmed candidates at high throughput. We have delivered tens of thousands of recombinant antibodies for more than 3,000 biotech and pharma companies worldwide.

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For more information about Biointron Biological USA Inc., contact the company here: Biointron Biological USA Inc. Biointron+1 (732) 790-8340 info@biointron.com 20 University Road, Suite 500, Cambridge, MA 02138

Biointron Biological USA Inc.

Website: <https://www.biointron.com/>

Email: info@biointron.com

Phone: +1 (732) 790-8340