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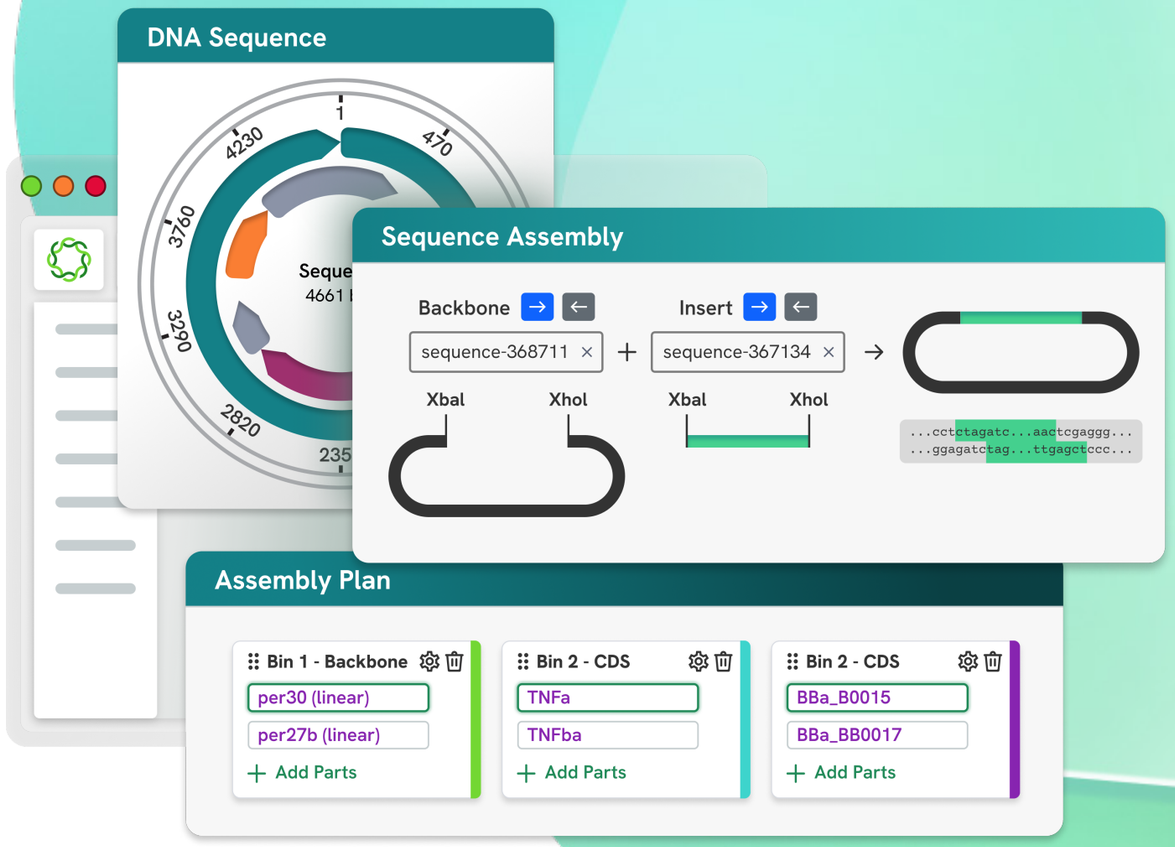
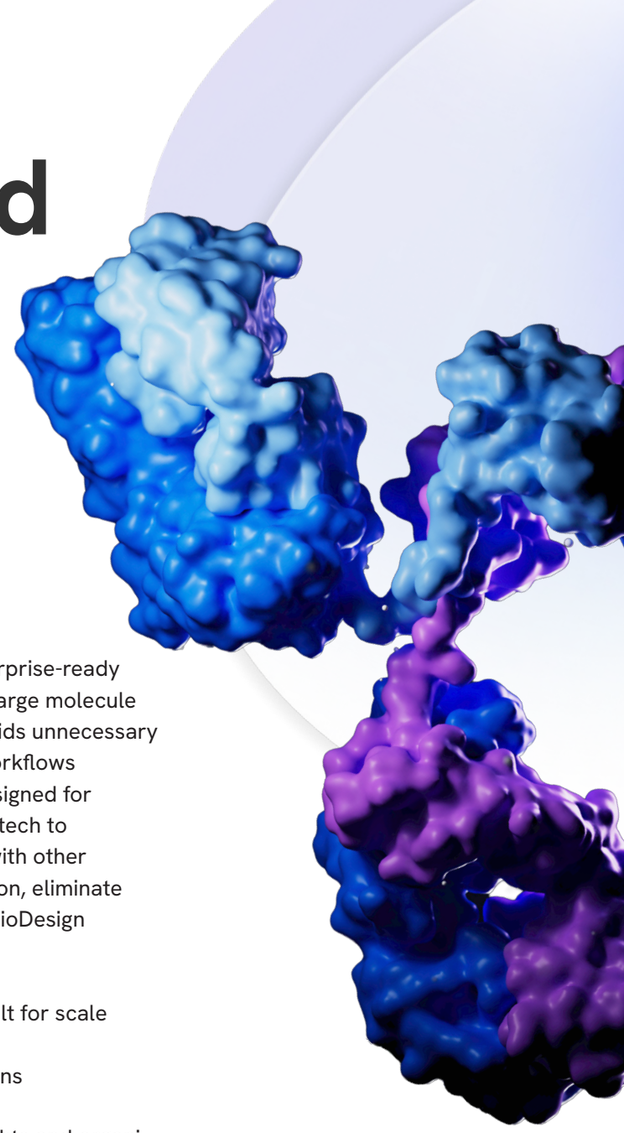
Signals BioDesign™

Cloning Without Complexity



PRODUCT BROCHURE

Streamline, Connect, and Scale Your Molecular Biology Operations



Signals BioDesign is a streamlined, enterprise-ready SaaS molecular biology product that improves large molecule design.

Molecular biologists face challenges that extend beyond the limitations of individual tools that support isolated tasks rather than integrated workflows. Scientists need to know why certain cloning strategies work, how to optimize primer design based on historical success rates, and how to improve constructs over time. Yet knowledge remains trapped with individuals rather than becoming organizational expertise. The industry lacks products that can recommend optimal cloning approaches based on target sequences, predict potential issues before bench work begins, or automatically suggest improvements based on similar successful projects.

- Molecular biologists experience daily friction caused by overly complex cloning tools.
- Construct libraries, cloning protocols, and optimized sequences cannot be scaled across the enterprise.
- Disconnected tools scatter data, waste time, and block collaboration.

Revvity Signals BioDesign is a streamlined, enterprise-ready SaaS molecular biology product that improves large molecule design. Focusing on core cloning features, it avoids unnecessary complexity while supporting high-throughput workflows capable of modeling thousands of plasmids. Designed for any organization — from small and medium biotech to global pharma — Signals BioDesign integrates with other Revvity Signals solutions to enhance collaboration, eliminate redundancy, and simplify data sharing. Signals BioDesign provides:

- Simple, effective molecular biology tools built for scale
- Connectivity to other Revvity Signals solutions
- The ability to unlock molecular biology insights and organizational knowledge .

Simple, Effective Tools

80% of productivity comes from only 20% of the functions available with feature-heavy software.

Daily Workflow Friction

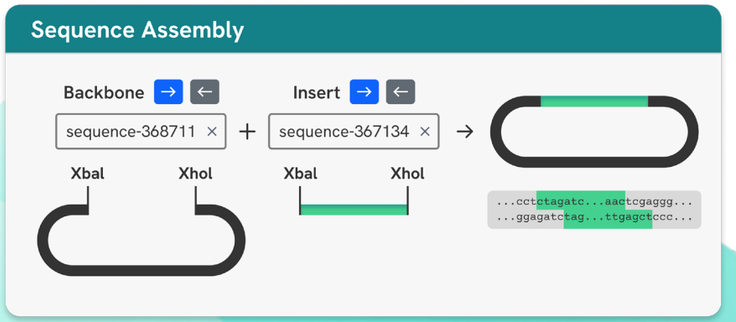
- Scientists require cloning tools that prioritize simplicity.
- Complex software interfaces with hundreds of features, many of which may not be used routinely, slowing scientists down.

Simple, Effective Molecular Biology Tools

- Focuses on core functionality scientists use daily in their molecular biology workflows.
- Researchers can focus on science, not software navigation.

Streamlined Molecular Biology Operations

- Employ essential molecular biology methodologies (Golden Gate, Gibson Assembly®, restriction/ligation) using interfaces designed for speed and accuracy..
- Automate primer design, sequence validation, and cloning strategy optimization.
- Eliminate manual calculations while maintaining flexibility for custom approaches.
- Bulk operations support up to 1,000 constructs with the same simplicity as single designs.



Connected to Revvity Signals Solutions

Disconnected Tools Waste Time and Resources

- Constantly switching between disconnected tools wastes time, breaks experimental narrative, and introduces manual errors.
- When sequence libraries are scattered across individual computers and shared drives, scientists often recreate existing constructs.
- Desktop tools result in emailing files, creating version-control chaos, and blocking real-time design iteration.

Connectivity to Revvity Signals Solutions

- Integrates molecular design directly with experimental execution and data analysis, preserving context from design through characterization.
- Prevents recreated work while improving knowledge discovery.

A Connected Workflow Ecosystem

- Construct design integrates directly with experimental planning, materials registration, and results analysis.
- Sequence libraries are centralized, with intelligent duplicate detection and similarity searching.
- Real-time collaboration lets distributed teams iterate on designs together without complicated file management.
- API connectivity allows integration with existing laboratory systems while maintaining workflow continuity from initial design through final characterization and publication.

Scalable Without Complexity

Barriers to Enterprise Scalability

- Existing tools either lack enterprise capabilities or bury usability under feature-laden complexity.
- Desktop tools create overhead for administrators and IT.
- Teams cannot standardize cloning protocols, share validated primer sets, or distribute optimized sequences.

Scalable Bulk Cloning

- Delivers enterprise-scale and tracking with intuitive, consumer-grade user experiences for therapeutic development and manufacturing.
- Successful molecular designs transition smoothly from individual experiments to production-scale operations.

Enterprise-Ready Scalability Without the Complexity

- Cloud-native architecture provides enterprise-grade security, audit trails, and access controls through the user-friendly interfaces seen in all Signals solutions.
- Standardized cloning protocols can be shared across teams while maintaining individual flexibility.
- Bulk cloning operations handle high-throughput workflows with automated quality controls and progress tracking.
- Simple license management scales from individuals to organization-wide deployments without administrative burden.

Focused on Features Scientists Really Need

Desktop tools often slow molecular biology teams down, causing them to spend more time navigating complex interfaces than actually designing constructs.

We identified the core workflows that drive 80% of molecular biology productivity and perfected those experiences.

This approach delivers faster user adoption, higher daily usage, and better outcomes for molecular biology tasks. We're building a product you will use daily rather than a comprehensive tool you will struggle with occasionally.

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Features Solving Core Problems

Cloning Operations

- **Bulk cloning:** Processes multiple constructs simultaneously within a cloning workflow. Scales individual successes to production-scale operations.
- **Logic & error handling:** Flags faulty sequences before cloning. Catches cloning errors before moving to the lab.

Primer Design & PCR Management

- **PCR product tracking:** Automates primer registration and tracking. Links design decisions to experimental outcomes.
- **Generate and track primers:** Designed primers are associated with their cloning plans and output sequences. Eliminates manual tracking spreadsheets.

Protein Engineering

- **Translation:** Automates protein sequence generation from DNA constructs. Eliminates manual translation errors.
- **Codon optimization:** Optimizes back-translation for different expression systems. Removes guesswork from protein expression.
- **Properties analysis:** Integrates protein property prediction. No external software required for basic characterization.

Search & Discovery

- **Intelligent sequence search:** Search by BLAST, substring, or full identity combined with metadata. Leverage institutional knowledge to avoid duplicate work.

Registration & Data Management

- **Unique ID system:** Automates tracking with full audit trails. Supports both research flexibility and enterprise compliance.
- **Metadata standards:** Structured data capture enables immediate use and long-term data mining.

Visualization & Analysis

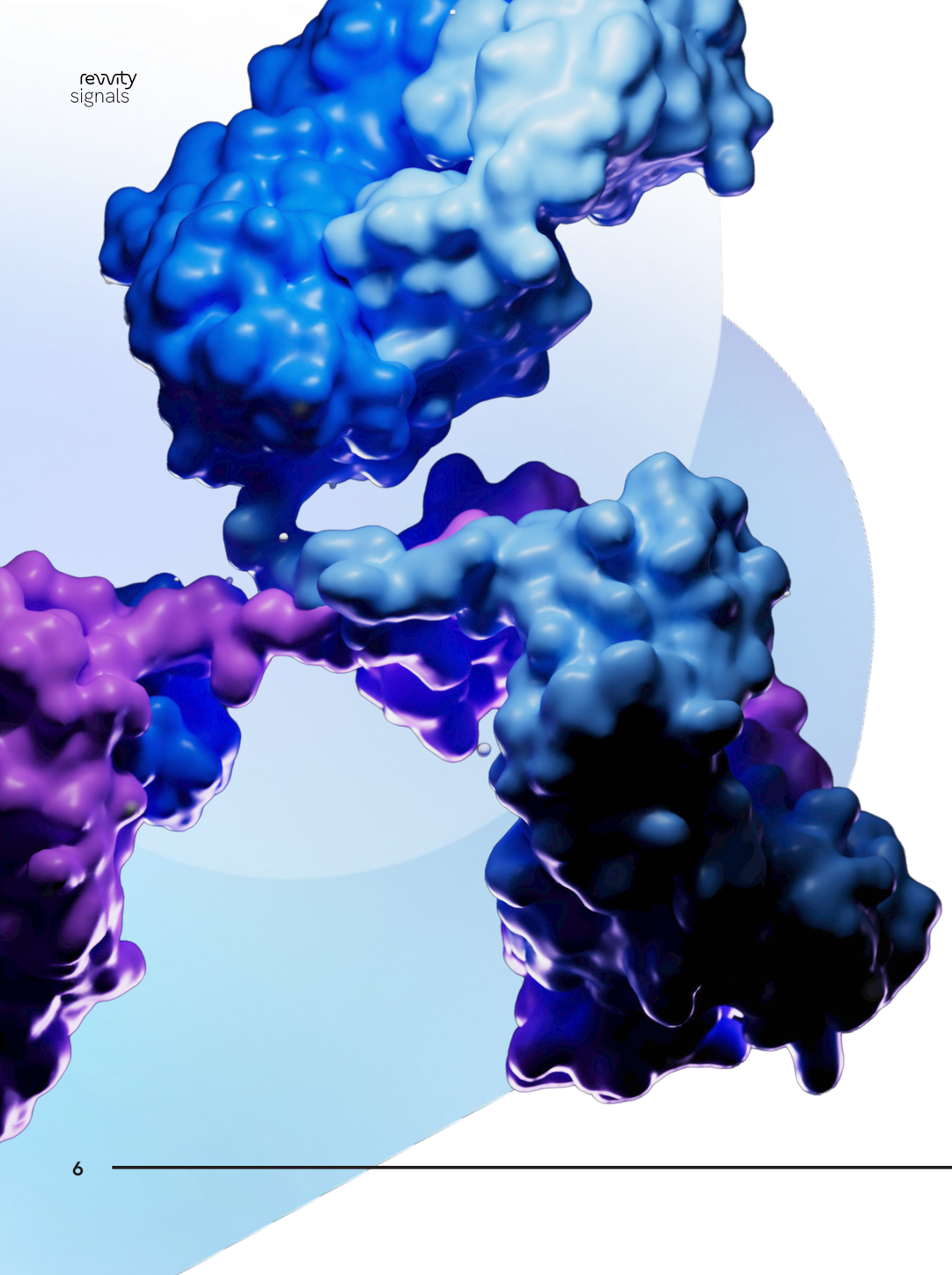
- **Annotation tools:** Enables rich sequence annotation for complex molecular designs. Makes sophisticated constructs interpretable and shareable.
- **Visual cloning plans:** Graphical cloning strategy representation makes complex molecular biology accessible to broader research teams.
- **Sequence relationships:** Tracks the final sequences back to their original inputs.

Ecosystem Connectivity

- **API integration:** Programmatic access facilitates custom workflows and existing system integration. Eliminates data silos.
- **Signals Notebook and Signals One integration:** Connects directly to ELN. Maintains experimental context without manual data transfer.

Collaboration & Permissions

- **Permission management:** Granular access controls balance open collaboration with IP protection. Scales from small teams to large organizations.

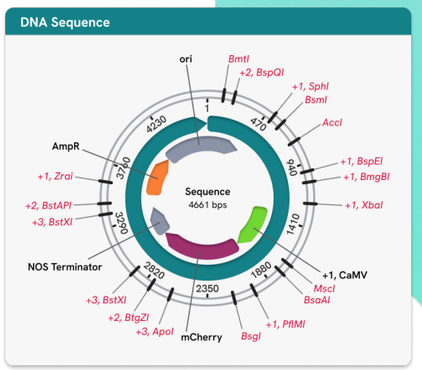


The Impact of Simple, Connected, Scalable Workflows

Signals BioDesign transforms molecular biology from disconnected tasks into integrated, scalable workflows built through direct customer collaboration. We listened to molecular biologists to understand what you need instead of what others think you want. Our goal is to connect, streamline, and scale molecular biology workflows that meet your needs.

Signals BioDesign allows users to standardize best practices based on real workflow needs, reduce errors through streamlined processes that eliminate tool-switching friction, accelerate research timelines by focusing on productivity-driving functions, and scale successful approaches across teams and projects without the complexity that slows adoption.

The result is molecular biology software that molecular biologists want to use, leading to faster time-to-value and measurable improvements in research velocity.



[Watch and learn more about Signals BioDesign]

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