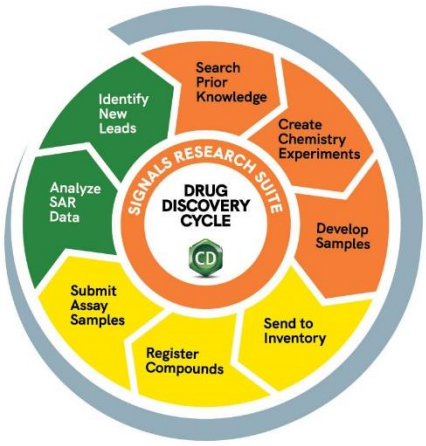
DATA SHEET

Signals Notebook for Discovery Chemistry

Give back more scientific quality time to chemists, and increase chances of drug discovery success

Revvity Signals Notebook, integrated with the industry-standard ChemDraw, provides chemists involved in drug discovery with an intuitive, cloud electronic lab notebook (ELN) that streamlines data management, promotes collaboration, and enables rapid insights to accelerate innovation and discovery.

Chemists involved in drug discovery are challenged by an abundance of data, a lack of integrated tools, and ever-shrinking time for creative scientific exploration. More than a productivity tool, Signals Notebook speeds users to insight, fosters insightful collaborations, improves decision-making, and accelerates discovery.



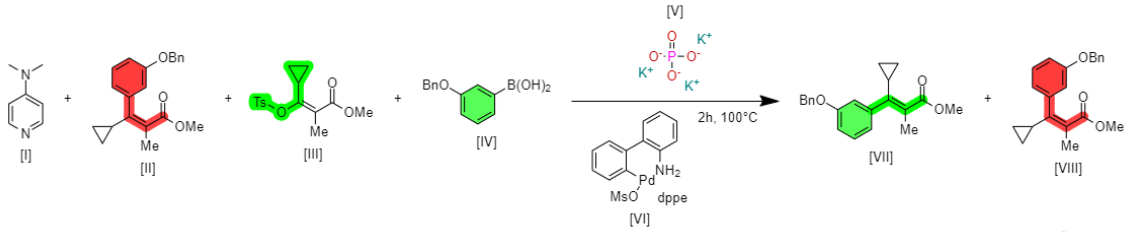
Signals Notebook- The Starting Point for Drug Design in the Signals Research Suite

Signals Notebook is part of the Signals Research Suite that is powered by ChemDraw, the chemical communication solution and TIBCO® Spotfire®, the leading visual data analytics software. By combining all the software applications needed for the Make-Test-Decide drug discovery cycle in one integrated platform, Signals Research Suite helps discovery chemists improve research efficiency and uncover unforeseen insights. This ultimately improves the success rate of drug discovery projects and hence the likelihood of bringing novel drugs to market.

The only ELN with Native ChemDraw Integration

Experience the unmatched benefits of integrating the industry's gold standard chemical drawing and communication solution, ChemDraw, directly within the Signals Notebook. This native ChemDraw integration transforms Signals Notebook into a chemistry-intelligent platform, offering a wide range of advanced features such as:

- Automated Stoichiometry Calculations and Auto Text: Signals Notebook automatically populates stoichiometry tables, adjusts calculations based on reaction stoichiometry and number of equivalents, providing appropriate units of measure, and ensuring accuracy in experimental data. Updated amounts from the stoichiometry table are automatically updated in the written experimental procedure.
- Comprehensive Search Functionality: Users can search for chemicals using their CAS Number, structure, or name. Additionally, Signals Notebook offers full access to PubChem material safety data sheets, and a wealth of other valuable resources, simplifying the process of finding and referencing essential information.
- Multiple structural formats: Create drawings of structures and reactions by simply pasting SMILES strings or drag and drop ChemDraw or .mol files directly into the canvas. Researchers get greater flexibility in visualizing and handling chemical structures.
- ChemACX Explorer enables searching for chemical supplier information and chemical property exploration for compounds that are commercially available as well as CAS Registry number search to find chemical structures. Those chemicals can then directly be added to an experiment reaction scheme



Reactants

Rxn ID	Reactant	MF	MW	EM	Limit?	Eq	d	Sample Mass	Moles
I	N,N-dimethylpyridin-4-amine	$C_7H_{10}N_2$	122.17	122.084398		2		0.51 g	4.2 mmol
II	methyl (Z)-3-(3-(benzyloxy)phenyl)-3-cyclopropyl-2-methylacrylate	$C_{21}H_{22}O_3$	322.40	322.15689		1		0.67 g	2.1 mmol
III	methyl (E)-3-cyclopropyl-2-methyl-3-(tosyloxy)acrylate, 4 water, 4...	$C_{15}H_{18}O_5S{\cdot}4H_2O$	310.36	310.08749	✓	1	1.12 g/mL	0.80 g	2.1 mmol
IV	(3-(benzyloxy)phenyl)boronic acid	$C_{13}H_{13}BO_3$	228.05	228.09577		1		0.48 g	2.1 mmol
V	potassium phosphate	K_3O_4P	212.26	211.84454		3		1.3 g	6.3 mmol
VI	precatalyst	$C_{39}H_{37}NO_3P_2PdS$	768.16	767.10042		1.5		2.4 g	3.1 mmol

Figure 1. An example of a coupling reaction drawn with ChemDraw in Signals Notebook and its corresponding, automatically populated stoichiometry table.

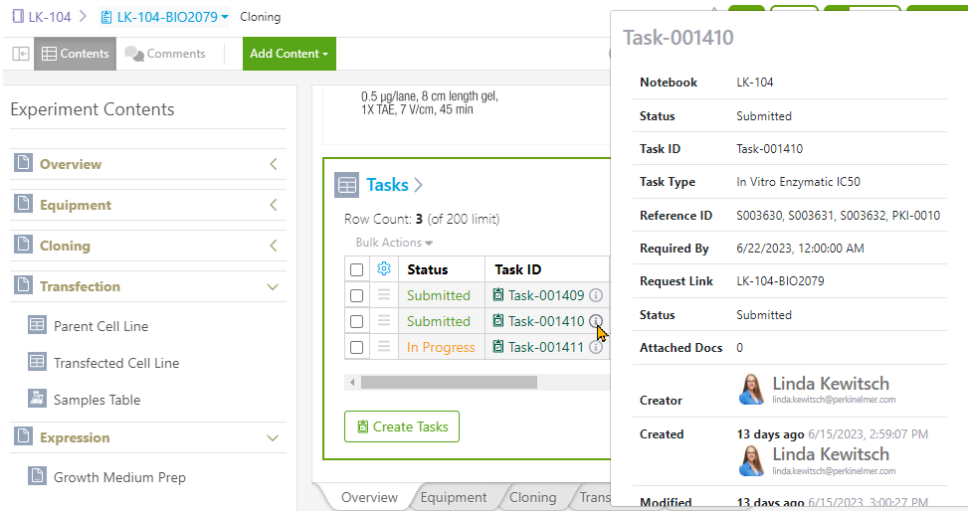


Figure 2. An example of a biological task request within a Signals Notebook experiment, allowing for seamless cross-disciplinary collaboration. A simple hover over tasks immediately gives a glance of important sample information.

Support Chemistry/Biology Collaboration

Signals Notebook encourages real-time multidisciplinary collaboration with on-demand experiment-sharing within and outside organizations. As analytical methods progress through the drug development process, Signals Notebook supports workflows including and beyond pharmaceutical R&D. Synthetic, analytical, (bio)formulation, and (bio)process scientists and biologists working in areas from screening to preclinical and clinical development can now share the same ELN.

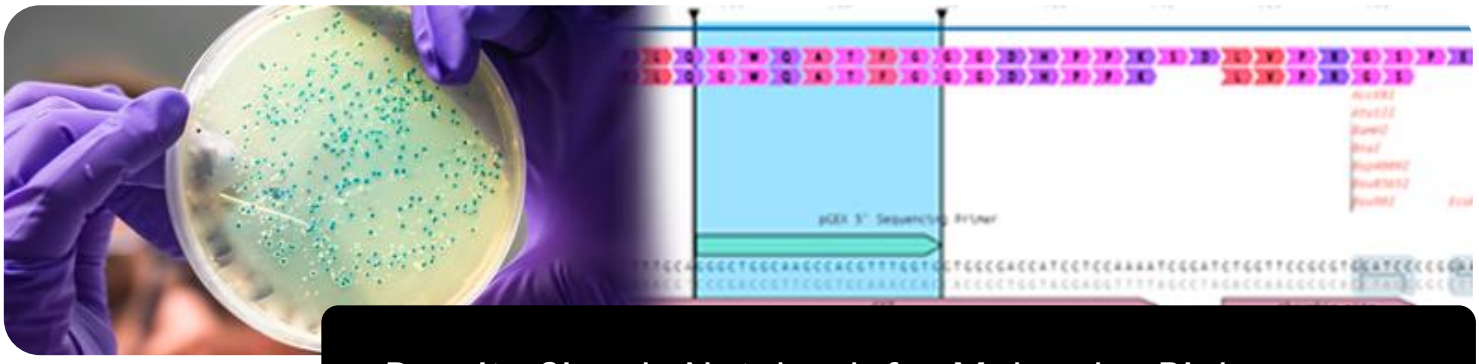
Their research and experimental needs are supported in Signals Notebook so they can share and exchange data in the same environment. This integration becomes more critical as more drug discovery methods and new modalities call for the input, analysis, and sharing of chemical data and structures, as well as biological peptides, proteins, viral vectors, sequence, and expression data.

As a productivity solution, Signals Notebook automates data capture and experiment note-taking, is user-friendly for data management, and natively integrates with Microsoft Word, Excel, PowerPoint, PDFs. Scientific papers, spectral scans, and more can be directly included in experimental procedures in the notebook.

Parallel Chemistry Experiments: Library Creation (Combinatorial Chemistry)

Added at customers' request, this ability to create sub-experiments within an experiment helps enumerate compound libraries and keep track of syntheses. Parallel experiments streamline the process and allow for efficient organization and management of complex synthesis projects. This feature is particularly useful in combinatorial chemistry, where numerous compounds are synthesized simultaneously to expedite the drug discovery process.

By facilitating the management of multiple reactions and conditions, Signals Notebook enables researchers to optimize their experimental design, compare results, and identify the most promising candidates for further investigation. The parallel experiments functionality empowers chemists to maximize productivity and accelerate the discovery of novel compounds, contributing to the development of new therapeutics.



Revvity Signals Notebook for Molecular Biology

At a Glance

Proven with 1 million users, Signals Notebook also serves Molecular Biology

More than a million scientists in 4,000 laboratories rely on Signals Notebook as their go-to solution for scientific data tracking. Molecular biologists, find fit-for-purpose workflows and functionality that let them record, search, access, and share sequence information, all in one solution. More than a productivity tool, Signals Notebook speeds users to insight, accelerating discovery and improving decision-making. Importantly, biologists can collaborate with each other and their chemistry peers, driving innovation.

READ MORE

Benefits

- Captures all data and makes it accessible for researchers across the organization –and across drug discovery
- Intuitive: the user interface, workflows, visualizations, and dashboards make sense to molecular biologists and speed their adoption and acumen
- Fit-for-purpose: deep feature set for molecular biology, for recording, searching, and analyzing biological data
- Collaboration: facilitates the sharing of information and discovery of insights buried in data
- Part of Signals Research Platform: improves researchers' efficiency by providing all the software applications needed in a single platform, driving to unforeseen insights that ultimately improve the chances of bringing a novel medicine to market. *(Figure.1 example)*

Revvity Signals Notebook lets the cell and molecular biologist work with biological sequences inside experiments while preserving the lineage of samples and assets across experiments. It deals with DNA, Plasmids, RNA, and proteins to record search and analyze biological data and pathways. *(Figure 1)*

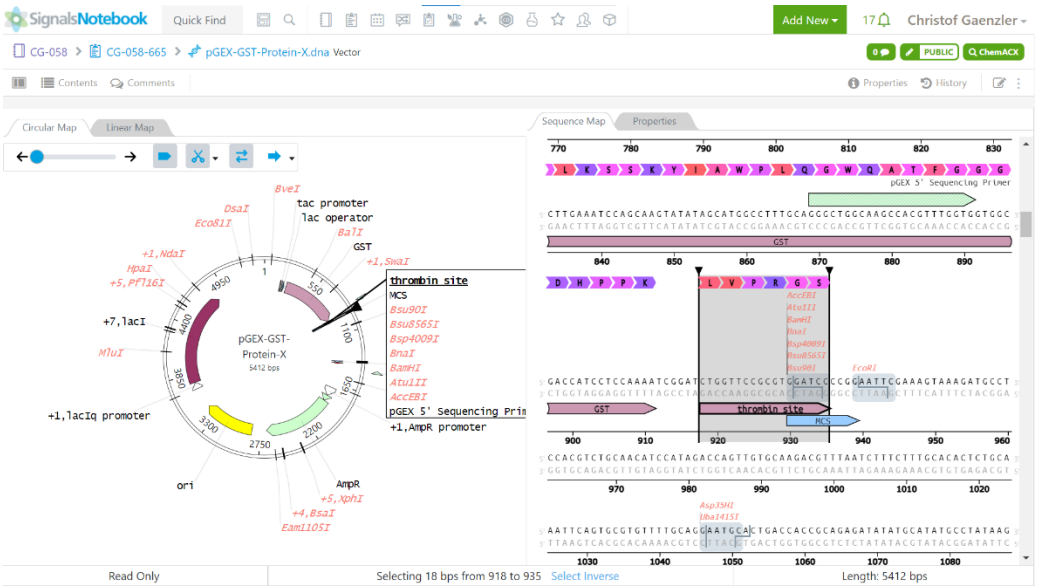


Figure 1: Dynamic preview of a plasmid map in a Signals Notebook experiment

Molecular Biologists join ranks of Signals Notebook users to Accelerate R&D

Biologists investigating and designing a range of molecules can accelerate their R&D with Revvity Informatics' cloud-based Signals Notebook. The leading electronic laboratory notebook for chemists, Signals Notebook has crossed into biology, offering workflows and a deep feature set to increase biologists' productivity and creativity.

Signals Notebook helps molecular biologists with experimental procedures, assay planning, recording, and analysis of biological sequences and associated metadata. Sequences can be viewed in the notebook – no leaving the platform or relying on third-party software.

While Signals Notebook addresses the research needs of all scientists, special features are designed with the molecular biologist in mind:

Dynamic Preview

Biological sequence files are stored and dynamically previewed in Signals Notebook, either as circular maps or linear maps, depending on molecule type Circular maps are the default for plasmids, while linear maps are the default for non-plasmid sequences. Users can toggle between

the two previews. Signals Notebook also loads and captures all associated metadata from the sequence file and displays it in the map and the properties tab. There, the user has access to listings of features, primers, restriction sites, and ORFs. From the properties tab, the sequence can be retrieved in either GenBank, FASTA, or JSON format (as shown in *Figure 2).*

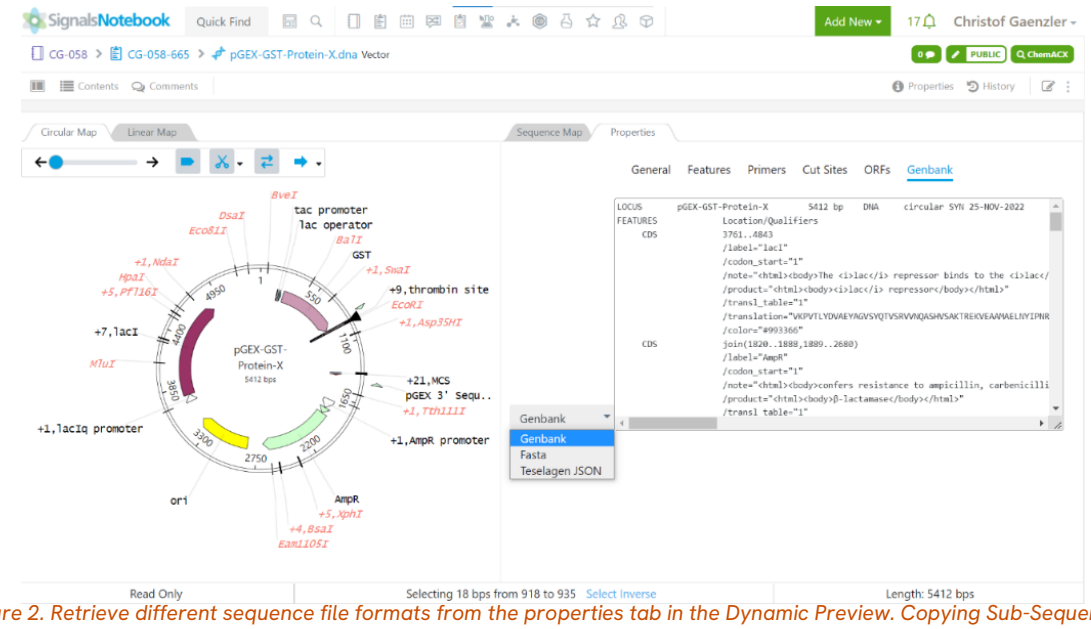


Figure 2. Retrieve different sequence file formats from the properties tab in the Dynamic Preview. Copying Sub-Sequences

Copying Sub-Sequences

An important capability is copying plasmids to the clipboard – with six options to make it easier for the molecular biologist:

- Copy Sequence as text
- Copy Complement and- Reverse Complement
- Copy Amino Acid Sequence
- Copy Reverse Complement for AA Sequence
- Copy GenBank for selection including features