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Genedata Screener[®]

for Combination Screening



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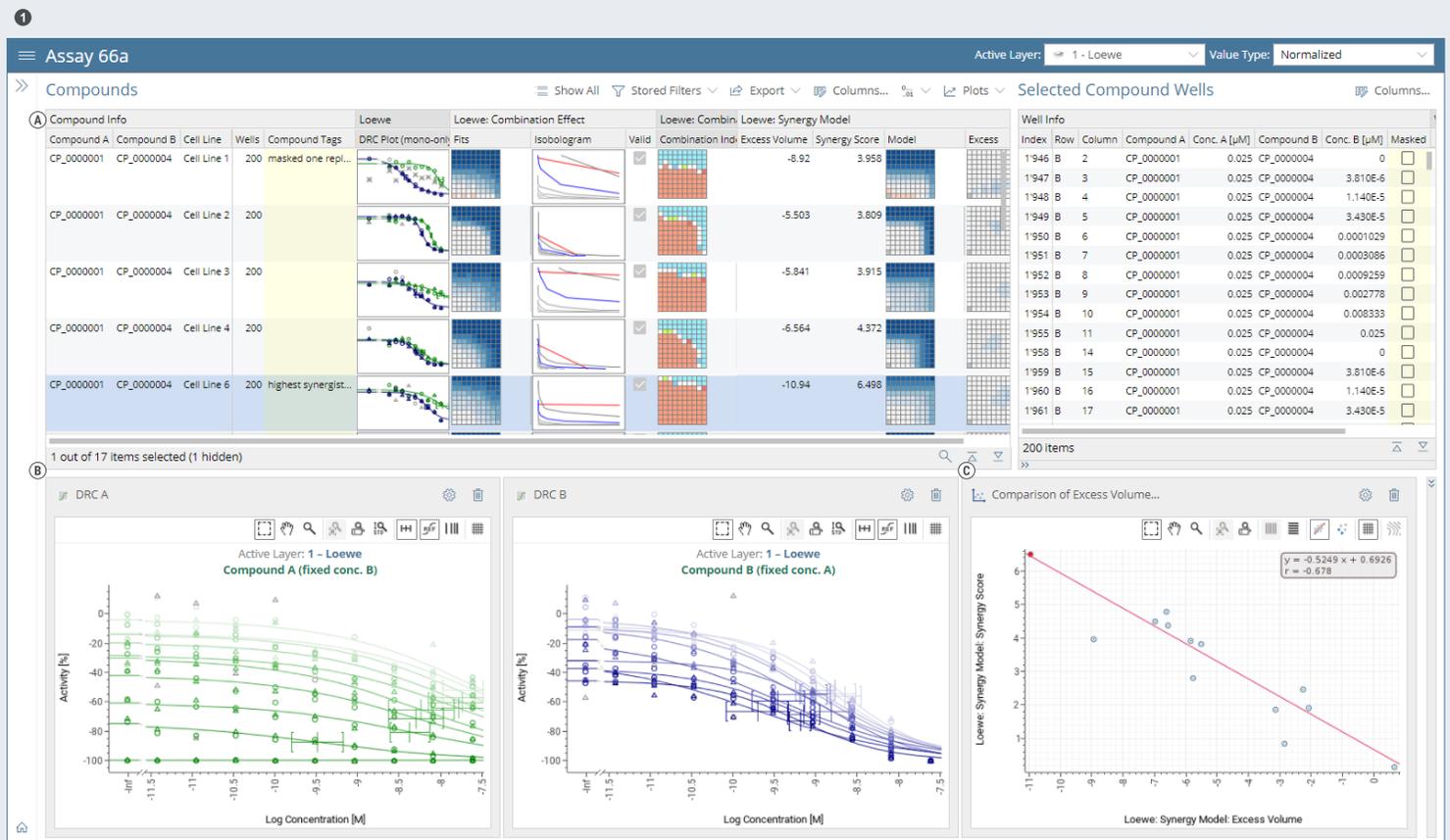
The importance of compound combination experiments in the search for effective drug therapies is increasing, but analysis of experimental results is not adequately supported by existing screening data systems. Genedata has developed a solution that handles the significant data volumes and complexity arising from such experiments. Screener for Combination Screening enables flexible, state-of-the-art quantification of synergistic combination effects and streamlines and accelerates the analysis of compound combination experiments, saving time, reducing costs, and increasing result quality.

A Combination Solution

Screener for Combination Screening provides a complete

processing workflow for compound combination experiments in a single software environment. Import raw data together with compound logistics information, analyze 100 or more compounds in a single experiment, and generate and compare results for the same combinations in different cell lines.

With flexible, re-usable experiment definitions, the analysis can be adapted to all kinds of combination screen designs. The available set of compound synergy calculations and matrix displays can easily be extended by new methods and algorithms via script-based APIs. With Genedata Screener, your analysis methods continue to improve, indefinitely.



1 View from a Compound Combination Campaign

A Visual representations of the results from several compound combinations and cell lines. Shown are e.g. dose-response curves for compound A and B (monotherapeutic), an isobologram showing the combination effect, the combination index, and the synergy excess volume and matrix. The table can be sorted by any of the displayed numerical results.

B Dose-response curves for Compound A at multiple concentrations (as indicated by line transparency) with fixed concentration of Compound B, and vice versa.

C Scatter plot showing the correlation between the excess volume and synergy scores. Any column values can be plotted this way.

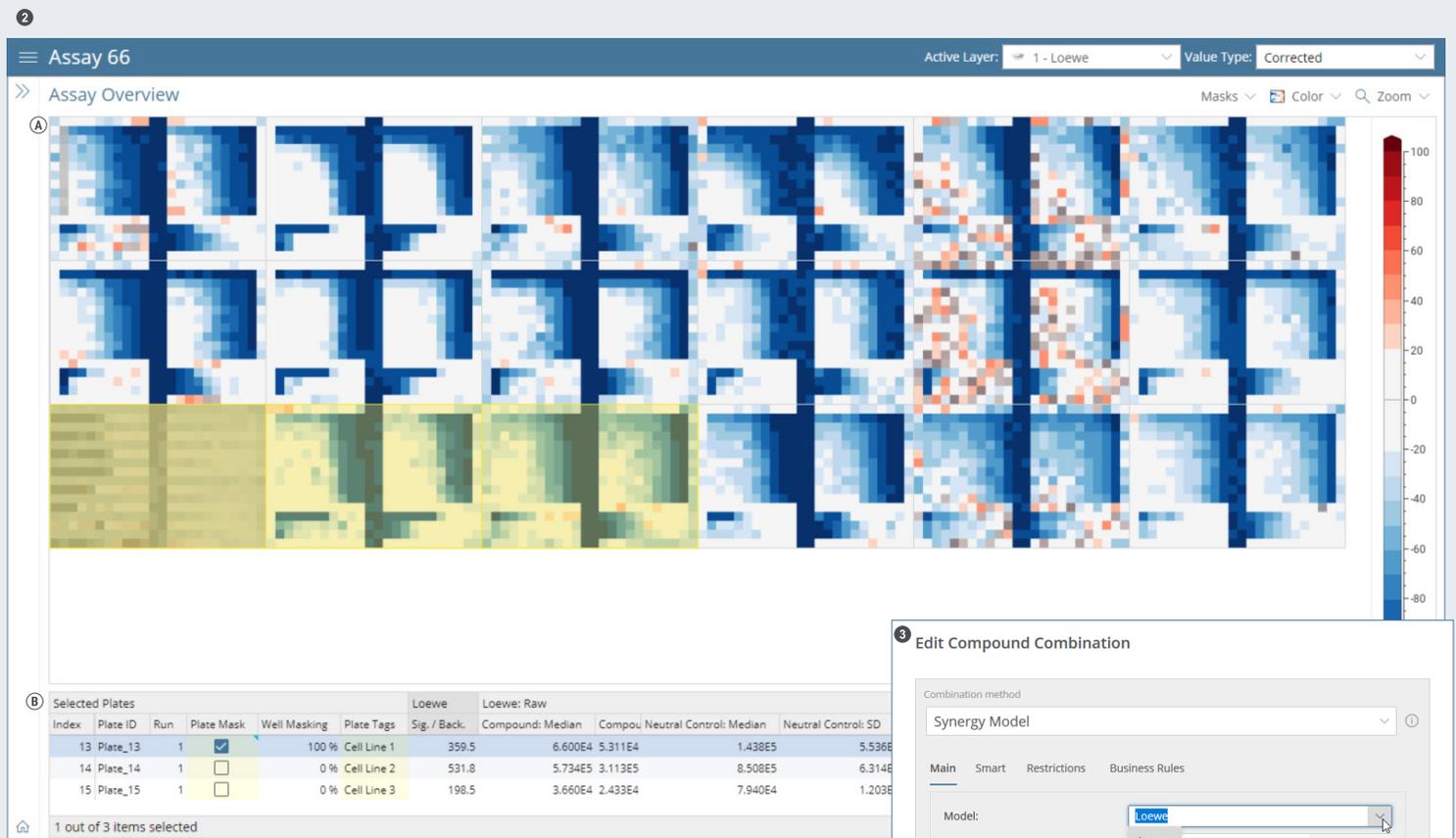
Save Time

Screener for Combination Screening saves you time – get from raw data to synergy scores for 15'000 combinations in less than five minutes.

The built-in automation allows you to easily compare results and improve result quality by processing a complete experiment in one single step. With a fully integrated workflow, there is no need for manual data processing. The analysis is defined once for thousands of combinations, and curves are fitted and combination effects calculated with a single mouse click. Compared to manual combination analysis, Screener for Combination Screening saves you hours of analysis time.

Increase Quality

Screener for Combination Screening has years of combination experiment know-how built in. Specific normalization methods compensate for cell growth and a highly reliable dose-response curve fitting algorithm generates the dose-response matrix, enabling batch processing of many compound combinations. Key quality parameters are provided on all analysis stages to identify quality problems and curate low-quality data. Compound combination effects are assessed using standard null models (Loewe, Bliss, HSA) and quantified by Synergy Scores and the Combination Index Method (Chou-Talalay). With Screener for Combination Screening, you can trust the quality of your results.



2 Quality Control at the Plate Level

- A The Assay Overview with 18 plates shown side by side, each with one combination measured in duplicate
- B Detailed information about the selected plates.

3 Method Selection

- A Methods can easily be selected and modified.

Visualize

With data as complex as that from combination experiments, visualization is key to understanding. Screener for Combination Screening uses combination-specific displays such as isobolograms and combination effect and excess heatmaps to provide quick result overviews. Visually inspect the measured and expected combination effects side by side and review alternative analyses for the same data sets in parallel.

To make sure that your colleagues easily understand your results, save all visualizations and graphical overviews in reports with your annotations. In fact, all calculated data and graphical output can be exported to a centralized storage, allowing easy access and enabling standardization of results and reports.

Interact

Automation can be made even more useful by adding flexibility. Screener for Combination Screening provides a fully interactive result review and refinement process so that you can use the time you save with the automation to produce even better results.

When you optimize the fit settings for one or more compounds, the dependent combination effect updates automatically. When you re-parameterize your Synergy Model, all combination results are re-calculated. This allows you to instantly see the effect of your adjustments without having to fine-tune anything else. Screener for Combination Screening provides automation to save time and interactivity to improve quality.

Solution of Choice

Developed in close collaboration with leading pharmaceutical companies, Screener for Combination Screening analyzes all data generated throughout the workflow, from raw instrument data to final synergy scores for all combinations studied. The software provides a high degree of automation, efficiency, and integration with customer screening data infrastructure, while encouraging interactive quality control and data review at all steps.

Supporting all plate-based screening, Genedata Screener improves productivity, eliminates redundancies, and drives innovative research. To read more about Genedata Screener, please see the One System for All Plate-Based Screening brochure.

GENEDATA SOLUTION



Genedata Screener® captures data from all assays, regardless of therapeutic modality or area. It automates analysis of even the most complex assays, on a single platform and in a harmonized manner, to ensure high result quality and better decision-making. © 2021 Genedata AG. All rights reserved. Genedata Screener is a registered trademark of Genedata AG. All other product and service names mentioned are the trademarks of their respective companies. 04S22

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GENEDATA

Genedata transforms data into intelligence with innovative software solutions incorporating extensive domain knowledge. Leading biopharmaceutical organizations rely on Genedata to digitalize and automate R&D processes. From discovery to clinic, Genedata solutions help maximize the ROI in R&D. Founded in 1997, Genedata is headquartered in Switzerland with offices around the world.

EXPERIENCED PARTNER

With more than a decade of experience in industrial screening data analysis and global enterprise deployments of Genedata solutions, Genedata is an ideal collaboration partner for companies wanting to advance their operations. In addition to the steadily evolving solution platforms, Genedata offers extensive opportunities for custom or co-development of specific new functionalities, procedures, or methodologies to support your current and future needs.

SERVICES AND SUPPORT

Genedata offers a range of services and support, from installation and customization to global rollout support, training, data analysis, application consulting and IT consulting services, all tailored to the specific needs of your organization. Our services team consists of highly skilled professionals with extensive domain knowledge in screening and software technology, bringing specialized know-how and experience to your organization.

NEXT STEPS

To find out more about Genedata Screener please visit www.genedata.com/screener.

For a conversation about your screening analysis needs or to schedule a live demonstration, please contact us at screener@genedata.com.