Genedata
solutions in silico

# Genedata Screener®

## Assay Catalog

Genedata Screener Assay Catalog helps scientists to provide biological context for both simple and complex screening results, ensuring that all experiments are annotated with rigor and consistency. By standardizing the context description on the corporate level, Assay Catalog ensures that every result is sufficiently characterized before it is uploaded to the data warehouse. Consequently, Assay Catalog gives project teams across the organization access to experimental information via biologically-informed queries and facilitates the interpretation and consolidation of results across experiments, for better decision-making. Moreover, the structure and machine-readability rendered by Assay Catalog opens the possibility of future, AI-assisted downstream analyses.

Assay Catalog is an out-of-box, fully-supported solution that evolves with the adoption of new assay technologies, making for an easy-to-implement, long-lasting data management system that enhances efficiency and productivity in drug discovery research and development.

## Unified Assay Inventory

Assay Catalog gives your organization the means to structure and provide biological context for your experimental data. It registers each assay with a unique ID, name, assay protocol, and a set of assay annotations and expected result types (Fig. ❷). It associates all assays with standard ontology and terminology, in a consistent fashion. With these curated assay definitions compiled in a single,

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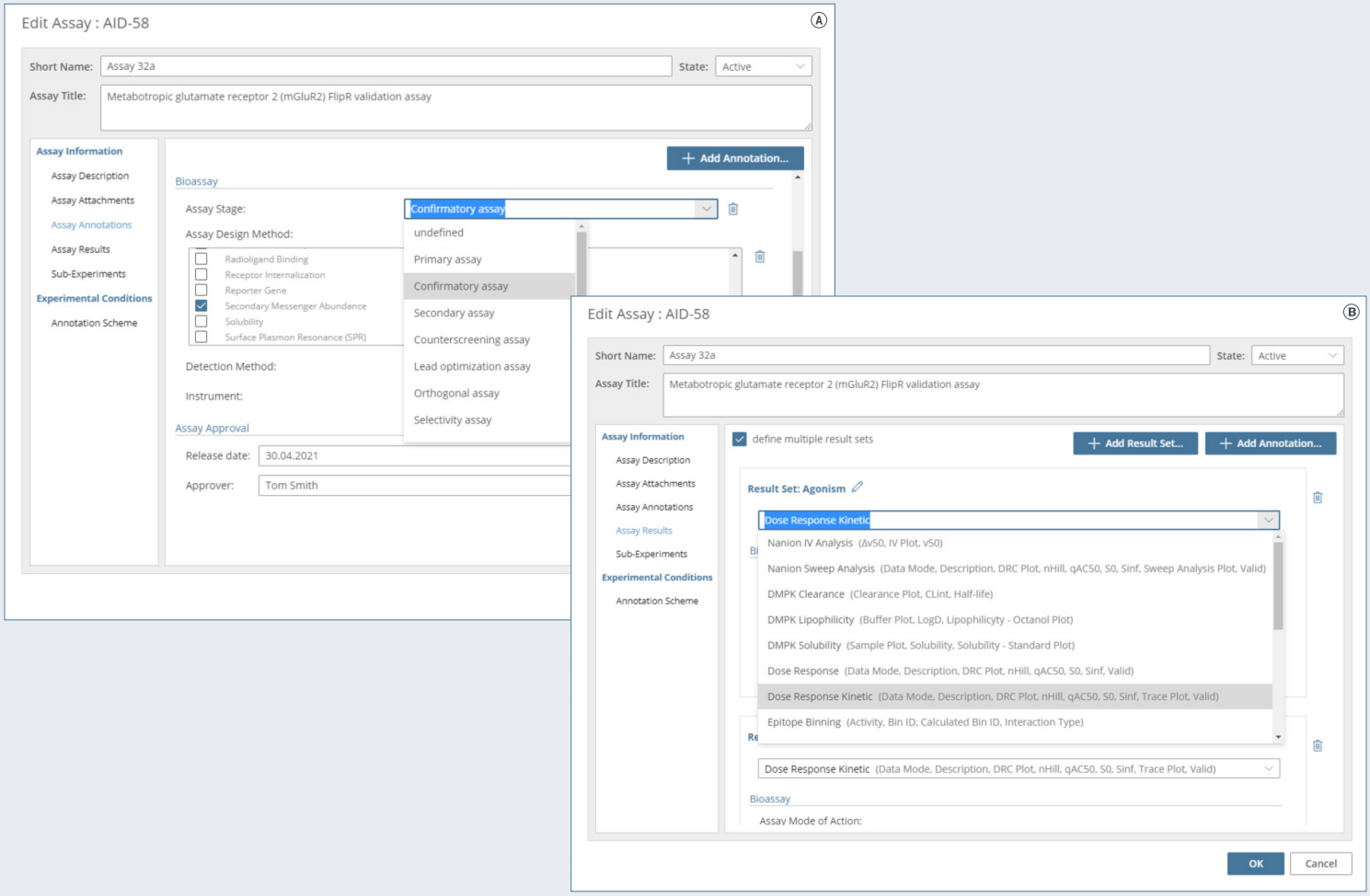


❶ *Consistent Usage of Corporate-Wide Annotations and Screening-Relevant Result Types*
Ⓐ *Assay Catalog structures the annotation of assays using a controlled yet configurable vocabulary. Types of annotations include lists, dates, text or numbers, covering diverse needs across the industry.* Ⓑ *Assay Catalog allows the selection of relevant result sets from a pre-defined list. In presence of multiple result sets, specific annotations can be added as well.*

central location, Assay Catalog serves as an easy-to-use, valuable resource for the entire R&D organization.

## A Seamless Workflow

Assay Catalog comes with configurable ontology and annotation schemata that can be adapted to an organization's own needs and policy. Once these are set, scientists themselves register assays by defining the biology and conditions of an experiment, the protocol, and the associated result types prior to measurement. Then, after experimental data is recorded, Screener Analyzer links it directly to the assay in Assay Catalog, so that upon its generation, every result is connected to its biological context, ensuring it is traceable and interpretable. Having the assay information already present during analysis helps ensure appropriate analysis decisions.

## Complex Assay Capture

Assay Catalog makes it simple to define formats of and annotate data from modern assays. This includes biochemical and cell-based, biophysical, and phenotypic assays that generate multiparametric or time-resolved data. It also includes experiments with more sophisticated designs and multiple conditions, such as cell panels. With Assay Catalog, the complex results of such assays are easily mapped for later interpretation. Importantly, unlike static in-house systems or out-of-date legacy systems, Assay Catalog is continuously maintained and developed by time-

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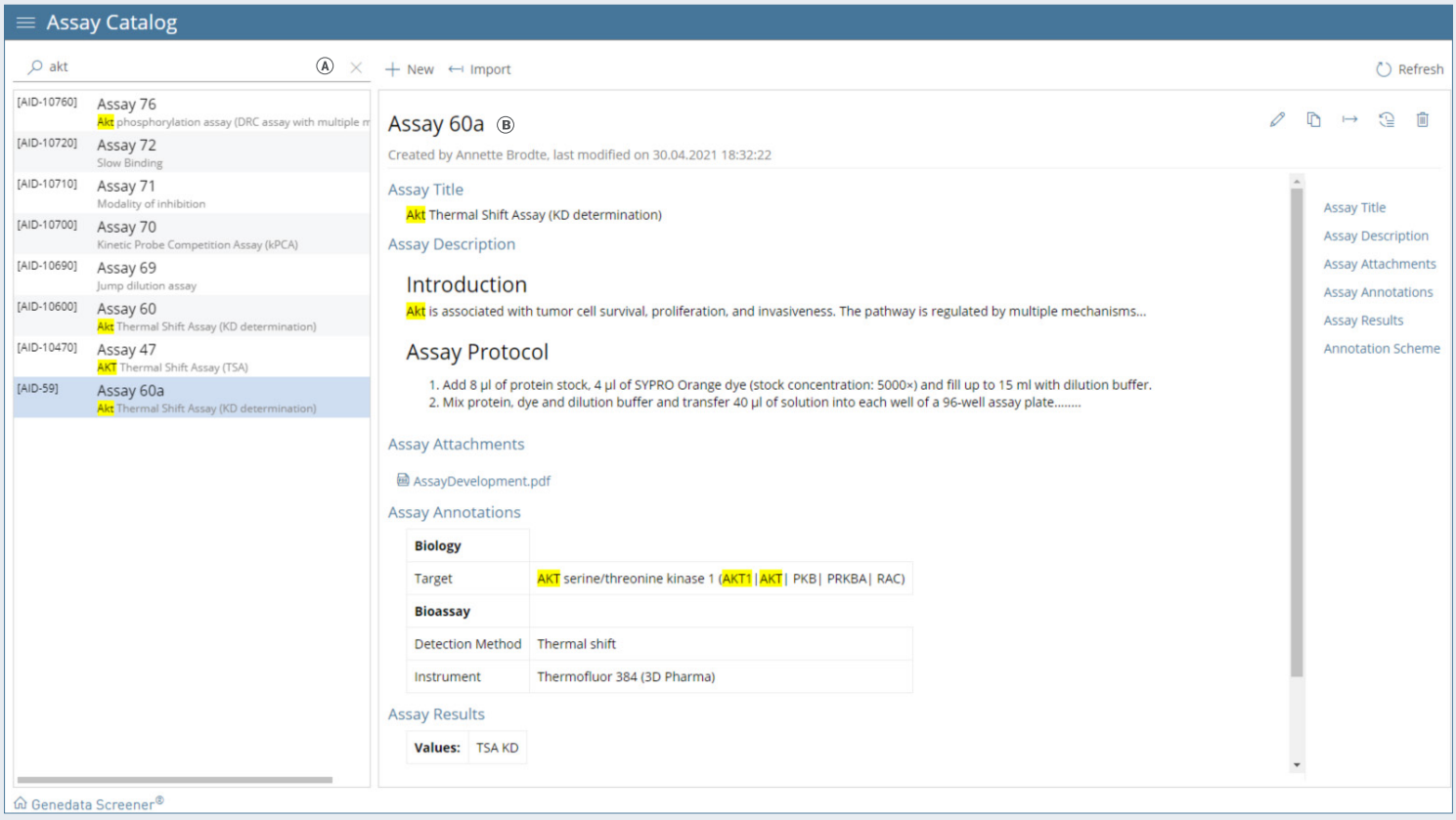


❷ *Enterprise Compilation of Assay Descriptions*
Ⓐ *The full-text search option on assay names, descriptions and annotations, allows scientists to easily find the information they need.* Ⓑ *Each assay is identified by a unique ID and features an assay name, a structured set of assay annotations, and the expected result types for the assay. One can also further describe the assay using an assay protocol in free-formatted text or by attaching files.*

tested, expert scientific and software teams at Genedata. This guarantees that Assay Catalog will evolve with the latest approaches and technologies in drug research and development, providing out-of-the-box support for today's experimental reality.

## Intelligent Querying

Assay Catalog gives a coherent structure and definition to the expected results of assays, so that experimental data can be linked, found, and easily compiled by scientists or consumed by automated and AI-supported downstream analysis systems. Results from different experiments or screening batches can be automatically categorized and consolidated by assay; the comprehensive description of experimental results enables their efficient and automated retrieval. Since Assay Catalog links all assays to standard terms, queries across assays within and across projects are easy to perform. This yields results with a clear and consistent meaning, creating a foundation for better project decisions.

## Maximized Efficiency

Assay Catalog maximizes operational efficiency and reduces costs. Because it consolidates and harmonizes information and makes it accessible across the organization, Assay Catalog eliminates potential redundancies and prevents unnecessary duplication of research efforts. Implementing and maintaining Assay Catalog requires minimal effort: it comes with a basic set of annotations and result types, providing a built-in basis from which you can quickly launch a full data management system. Its standardization, flexibility, and intuitive interface makes adopting new assay formats rapid and simple, without requiring a system overhaul. Assay Catalog also streamlines user management, by allowing designated users to independently register assays, therefore keeping control while reducing administrative burden on IT teams.

## Future-Proofness

Over time, research processes evolve and so do corresponding assay protocols. For minor changes, which have no impact on the comparability of results, assays can be just be modified. Traceability is ensured by a clear versioning concept. For major changes, new replacement assays need to be created. Phased out assays and result types can be inactivated, to ensure backwards compatibility and at the same time reduce risk of errors.

## Solution of Choice

As research organizations grow, better data management stewardship becomes more important than ever. Thanks to the standardized terminology, rich metadata and searchability that Assay Catalog provides, it helps promote best practices such as findability, accessibility, and reusability by all stakeholders. It also encourages proper and complete data reporting to corporate warehouses, due to its seamless integration with Genedata Screener and its Reporting APIs.

By using Assay Catalog, biopharmaceutical companies and research enterprises everywhere can better collect, document, trace and manage all assay results, enhancing data quality, adding value and facilitating more optimal decision-making.

**GENEDATA SOLUTION**

SCREENER





**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.