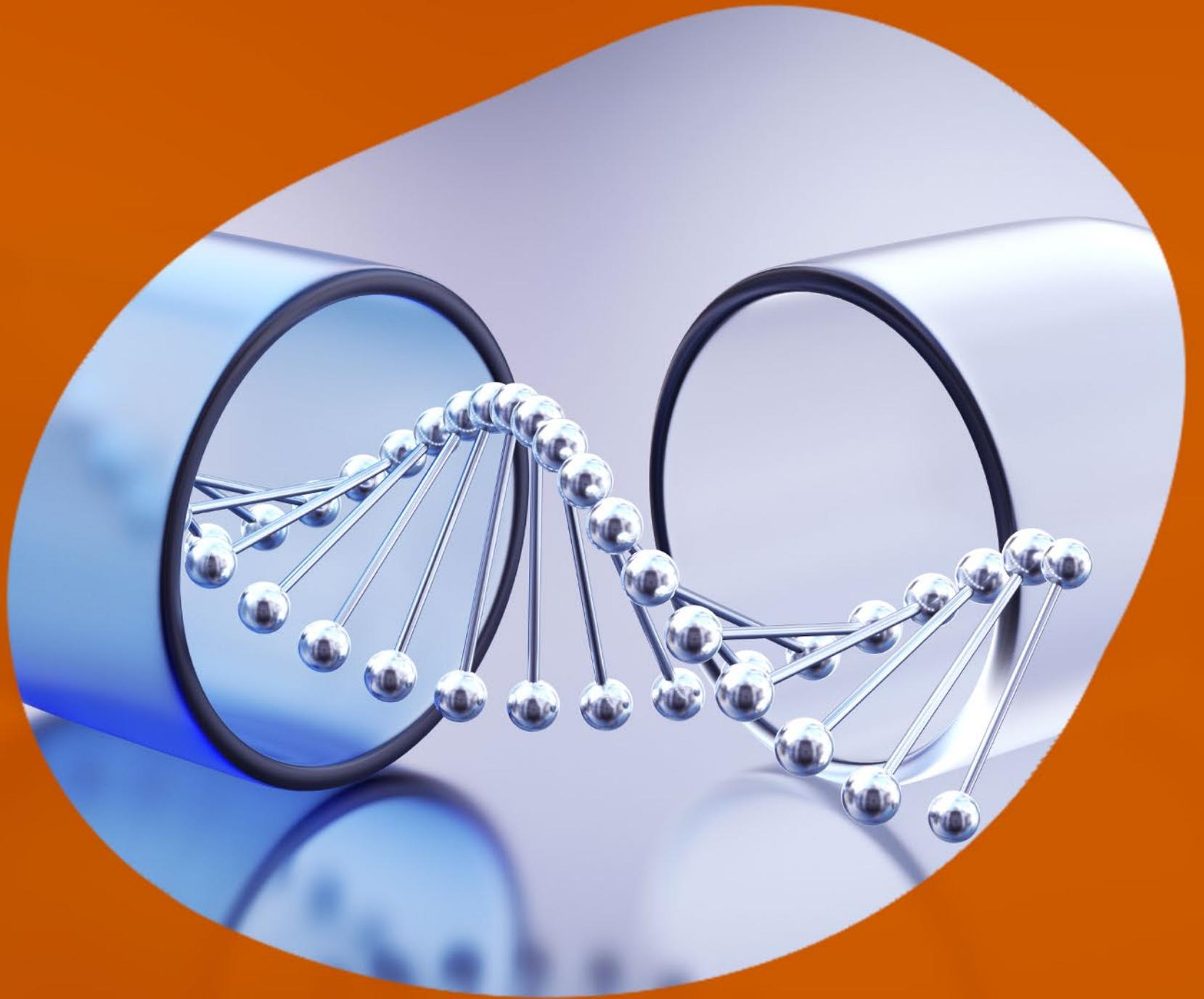


Actionable
data you
can trust.



revvity

Preclinical Services - Oncology



Your trusted service partner.

Accelerate from discovery through therapeutic development.

Our preclinical services team are a cell-based assay CRO specialized in the development and delivery of customer-defined screening services for oncology and immunology.

When you partner with us, you work directly with our research scientists throughout your program, allowing close collaboration and control over assay design and progress.

Our team is committed to delivering quality actionable data, so that you can make informed decisions to drive your science forward.

“We included data generated by Revvity as part of this Nature publication because they have consistently provided high-quality, actionable data that we trust.”

Dr. Philipp Jaeger
Director of High-Throughput Biology
Boehringer Ingelheim, Vienna

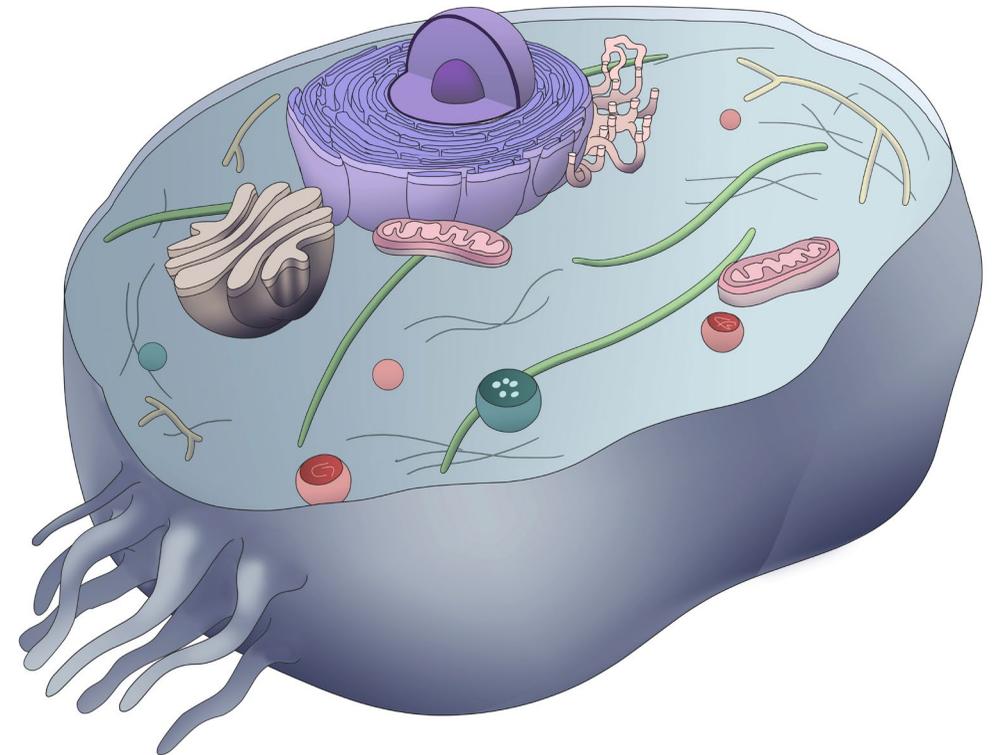
Kim, D. et al. Pan-KRAS inhibitor disables oncogenic signaling and tumor growth. *Nature* 619, 160-166 (2023)





Insights and answers to advance your science.

Drawing from deep expertise in high-throughput and cell-based screening, our experienced preclinical services team can work with you to answer a wide range of scientific questions.





Insights and answers to advanced questions

Drawing from deep expertise in cell-based screening, our services team can work on a range of scientific questions

Which cell lines and tissue types?

What is the mechanism of action?

Which models and optimization strategies?

What are the key biomarkers and critical path markers?

Which payload and drug delivery mechanism?

Which cells and indications?

With our preclinical services we can help you to:

- Identify cell lines and tissue types resistant or sensitive to drug profile
- Benchmark potency, selectivity and therapeutic window
- Explore drug synergies and guide combination strategies
- Facilitate indication expansion
- Inform translational strategy
- Identify predictive biomarkers of drug response
- Support lead optimization and medicinal chemistry



Insights and answers to advanced questions

Drawing from deep expertise in cell-based screening, our services team can work on a range of scientific questions:

Which cell line?

What is the target?

Which model and optimization?

What are the critical parameters and criteria?

Which payload and drug delivery mechanism?

What is the right target?

With our preclinical services we can help you to:

- Understand cellular response and processes at the biological level
- Evaluate physiologically-relevant gene edits
- Identify hits
- Determine genetic dependencies
- Reveal synthetic lethal targets
- Identify resistance liabilities
- Support target prioritization



Insights and answers to advanced questions

Drawing from deep expertise in cell-based screening, our services team can work on a range of scientific questions

Which cell models?

What is the mechanism of action?

Which models for dosing and optimization studies?

What are the key biomarkers and critical path markers?

Which payload and drug delivery mechanism?

Which models for dosing, toxicity, and optimization studies?

With our preclinical services we can help you to:

- Generate reporter or other similar cell models for screening
- Create sensitive or resistant surrogates to mimic primary cell behavior
- Assess dosage in 2D and 3D formats
- Derive models for synthetic lethal studies
- Assess knockout in haploid models to determine gene or mutation essentiality
- Establish genotype-phenotype relationships
- Validate and de-risk targets



Insights and answers to advancing

Drawing from deep expertise in cell-based screening, our services team can work on a range of scientific questions:

Which cell lines?

What is the MOA?

Which models and optimization?

What are the genetic drivers and critical mutations?

Which payload and drug delivery mechanism?

What are the MOA, genetic drivers, and critical mutations?

With our preclinical services we can help you to:

- Determine gene drivers for drug sensitivity and resistance
- Assess gene essentiality
- Analyze interaction pathways and MOA
- Evaluate gene-drug interactions
- Identify dosing effects
- Perform patient stratification and effective indication identification
- Discover synthetic lethal interactions
- Identify biomarkers to predict clinical response
- Determine targets to inform drug combination strategies



Insights and answers to advancing

Drawing from deep expertise in cell-based screening, our services team can work on a range of scientific questions:

Which cell

What is

Which model
and opti

What are the
and cri

Which payload and
drug delivery mechanism?

Which payload and drug delivery mechanism?

With our preclinical services we can help you to:

- Identify the most potent and efficacious payloads
- Differentiate mechanisms of action
- Assess drug penetration and efficacy in 2D and 3D models
- Optimize drug design
- And more!

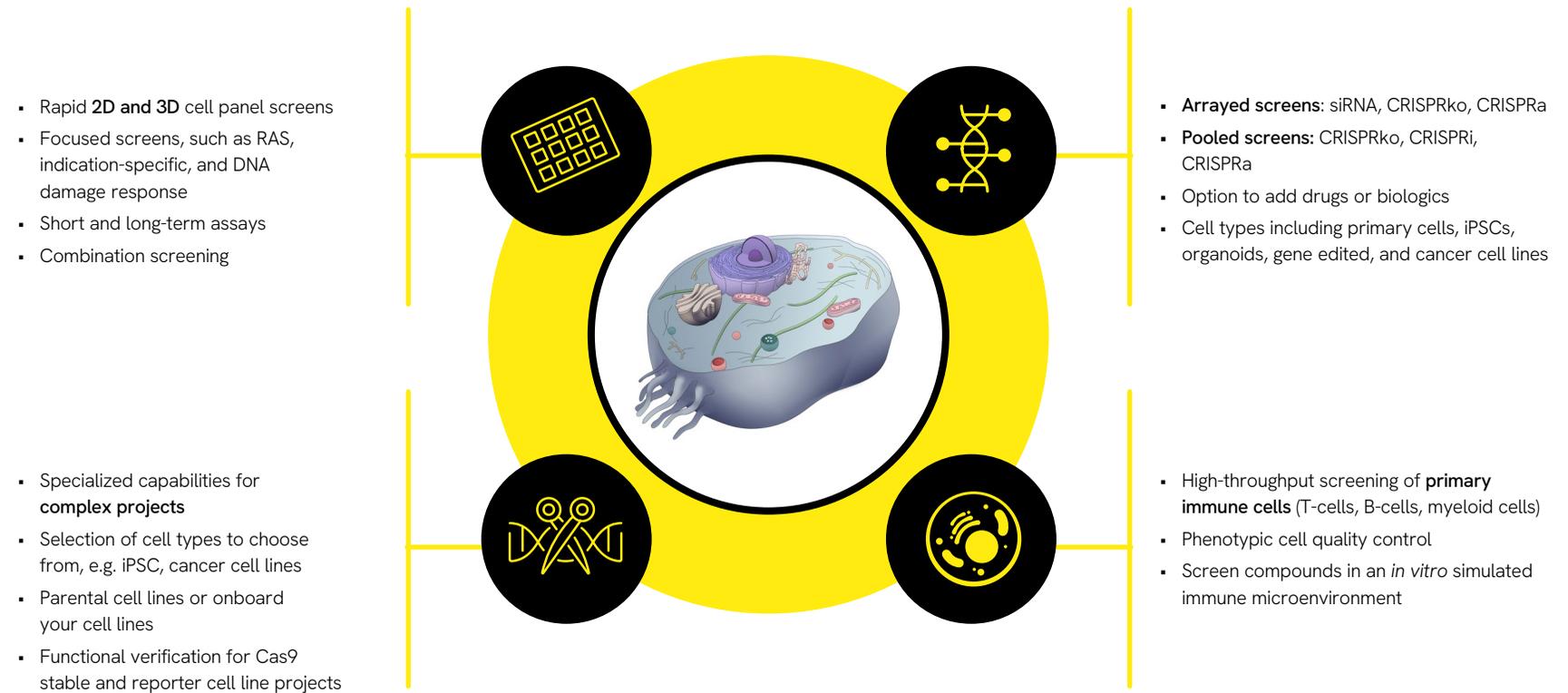
Our preclinical services are continuously evolving to meet our clients needs.

If you don't see your goal answered, please contact our team and we'd be happy to discuss your project with you to see if we can assist.



Our core capabilities

At the heart of our preclinical services are four core capabilities refined through decades of experience. But we've not stopped evolving. Working alongside our customers and the broader drug discovery community, we continuously advance our capabilities to meet emerging challenges and drive scientific innovation forward.



Choose from a range of readouts

Plate reader, including HTRF™, AlphaLISA™, ATP

High content screening (HCS) and live cell imaging

Genomics, transcriptomics, and single cell

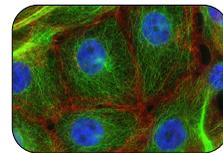
Flow cytometry



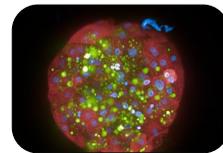
Discover drug potential with cell panel screening services

Cell panel screening is a powerful way to test compounds across large, genomically diverse panels of cell lines. This method delivers critical insights, such as identifying sensitive and resistant tumor types, highlighting genomic features governing drug response, providing efficacy and toxicity data early to help reduce late-stage failures in clinical trials, and determining which patient populations might respond better to a drug or drug combinations.

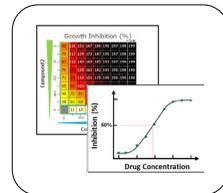
Rapid 2D and 3D cell panel screening



300 cell lines in 2D format using our OncoSignature™ platform



200 cell lines in 3D format using our OncoSignature™ platform



Growth inhibition measured by ATP-based viability readouts

Cell panel screening services tailored to your science

- Access 600+ cancer cell lines
- Fast and slow acting screening assay formats
- HTRF assays to profile your compound
- High-content screening (HCS) for multiplex cellular insights
- Drug combination screening
- Choose from multiple endpoints, e.g. ATP, HTRF, AlphaLISA, flow cytometry, imaging, transcriptomics, single cell
- Custom cell-based screening projects

APPLICATION NOTE

RNA-Seq characterization of model cell lines for drug discovery.

[Read more](#)



Unlock the power of genes with our functional genomic screening services

Functional genomic screening is a cornerstone of drug discovery as a tool to uncover gene function and validate drug targets by systematically linking genotype to phenotype. It helps to advance drug discovery by identifying essential genes, resistance mechanisms, and biomarkers, and supports the reduction of late-stage development failures.

Arrayed screens tailored to your application

- CRISPRko, CRISPRi, CRISPRa, and RNAi.
- Small molecules, biologics, or oligonucleotide therapeutics can be screened on our arrayed platforms.
- Screen a range of cell types:
 - Primary cells
 - iPSCs
 - Organoids
 - Gene edited cell lines
 - Cancer cell lines
 - Co-culture models

WHITE PAPER

Applying functional genomic strategies to high-content phenotypic screening

[Read more](#)

Choose from a range of assay endpoints



Genomics and transcriptomics

Mechanistic and spatial analysis of cellular perturbations using technologies such as Drug-Seq, CRISPR, and qPCR.



High-content screening

Multiparametric analysis, cell morphology changes, protein localization, and complex model growth.



Multimode plate reader

Reporter assays, cell toxicity and apoptosis, enzyme activity, cell proliferation, and protein expression.



High-throughput RT-qPCR

Transcriptional response, cell differentiation response, biomarker, and mRNA expression level.



Live cell kinetic imaging

Reporter assays, cell proliferation, toxicity, apoptosis, and complex model growth.



Pooled screens tailored to your application

- CRISPRko, CRISPRi and CRISPRa across a broad panel of cell lines and a subset of primary cells, including T cells.
- Small molecules, biologics, or oligonucleotide therapeutics can be added to our screens.
- Whole genome, targeted, and tiled libraries tailored to your assay questions.
- Screen a range of cell types:
 - Primary cells
 - iPSCs
 - Organoids
 - Gene edited cell lines
 - Cancer cell lines
 - Co-culture models

Choose from a range of assay endpoints



Single cell technologies

Causal mapping of gene function with single cell CRISPR screens using CROP-seq and CITE-Seq technologies such as BioLegend TotalSeq™ kits.



Flow cytometry

Linking phenotypic, protein-level, or cell-sorting data to genetic perturbations.



Base editing

Precise base edits that avoid double-strand breaks and preserve genomic integrity for improved safety with our Pin-point™ platform.

APPLICATION NOTE

CRISPR-Cas9 screening for target identification

[Read more](#)

The Pin-point™ base editing platform technology is available for clinical or diagnostic study and commercialization under a commercial license from Revvity.

For research use only.
Not for use in diagnostic procedures.



Reveal physiologically-relevant insights earlier with our immune cell screening services

Immune cell screening can provide deep insights into how therapies interact with the immune system, accelerating the path from discovery to clinical success. By harnessing biologically-relevant primary immune cells and advanced assays, you can identify novel drug targets, better understand MOAs, optimize leads, perform immune profiling for more personalized therapies, and assess safety to help reduce risks earlier in development.

ImmuSignature assay platform

Built on over a decade of experience, our ImmuSignature™ platform is a suite of immune cell assays that deliver reproducible, donor-relevant data.



Primary immune cells from multiple donors, co-cultures, and extensive phenotypic QC.



Multiple readouts, including FACS, NGS, HCS, and HTRF assays with configurable options for cytokines, and markers from various donors.



Miniaturized semi-automated 384-well high-throughput screening platform.



Standard assays for mixed lymphocyte reaction (MLR), macrophage polarization, T-cell activation, iTreg polarization, and iTreg suppression.



Fast analysis in as little as 3 weeks, with quadruplicate data points.



Custom options for different cell types, endpoints, and gene editing of immune cells.



Immune cell functional genomics

Empower your immune therapeutic development using functional genomics screening. Our preclinical services team has a unique ability to offer functional genomics powered by CRISPR screening to answer a variety of questions in a wide range of immune cell types, including:

- B-cell CRISPR KO screen
- B-EFF / B-FF reg
- Myeloid CRISPR KO screen
- T-cell CRISPR KO screen

Tailored Immune cell assays

Using our extensive experience and expertise in immune cell culture, we routinely work with customers on a range of immune cell assays, including:

- Macrophage polarization assay
- 2D T-cell killing assay
- 3D T-cell killing / invasion assay
- Hematopoietic stem cell assays



WHITE PAPER: Rapid high-throughput assessment of therapeutic immunogenicity

[Read more](#)



Creating complex disease models with precision using our cell line engineering services

Foundational for cell-based screening, cell line engineering creates reliable, genetically-tailored cell models to enable the study of disease mechanisms, production of therapeutic proteins, and testing drug safety and efficacy.

Your edit. Our expertise.

Our specialized cell line engineering services support complex projects for our clients and are backed by an extensive portfolio of gene-editing licenses and expertise across hundreds of cell lines.



Our team have performed 1000s of edits in 100s of cell lines with an average success rate of 95%.



Multiple gene editing licenses, including CRISPR Cas9 from Sigma and the Broad Institute, and our proprietary Pin-point™ base editing technology.



200+ parental cell lines from 20+ tissue types or onboard your own cell line.



We also offer a range of ready-to-go pre-engineered cell lines available to order online.

[Order online](#)

A range of cell modes:

Cancer cell lines - suspension and adherent

iPSC editing

Primary T-cell editing

Drug resistance cell lines

A range of edits:

Directed mutations

Large and small knock-ins

Multigene targeting knockouts

Reporters and tags

EXPERT INTERVIEW

Generating a clonal HAP1LIG4(-) Cas9(+) cell line.

[Read more](#)

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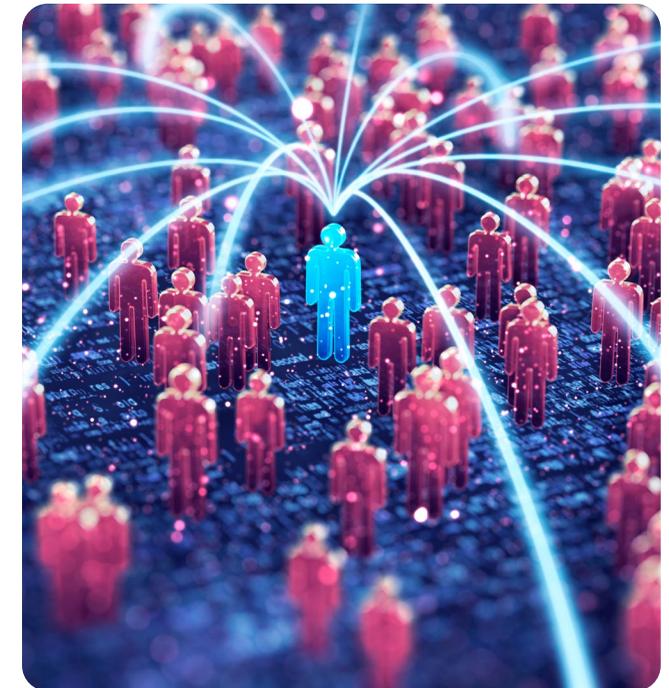


A network of experts and advanced technologies to propel your science forward

By working with our preclinical services team, you're gaining access to Revvity's network with deep knowledge and expertise across technologies for basic research, drug discovery and development, and clinical diagnostics.

Our preclinical services team work with a range of advanced technologies to deliver your projects, many of which are Revvity technologies, including:

- **OncoSignature™** 2D and 3D cell panel screening platforms
- **ImmuSignature™** immune cell screening assays
- **Dharmacon™** reagents and CRISPR/RNAi libraries
- **Pin-point™** base editing technology
- **Opera Phenix™** high-content screening system
- **HTRF™, AlphaLISA™, ATPlite™ 1glow** assay technologies
- **LentiBOOST™** transduction enhancer
- **BioLegend LEGENDplex™** multiplex immunoassay
- **CHOSOURCE™** expression platform



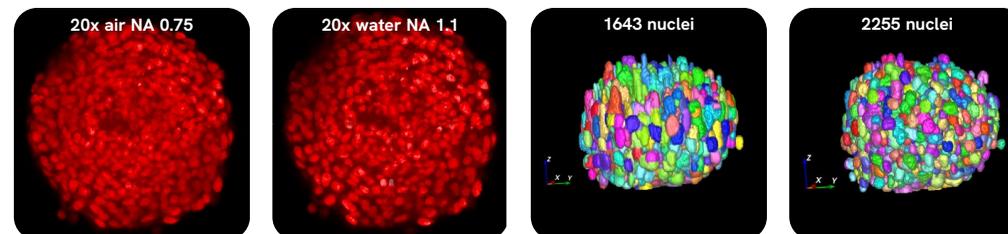
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Not for use in diagnostic procedures.



Spheroid images generated using the Opera Phenix high-content screening system

SCIENTIFIC POSTER

Illuminating the path to innovation: Revvity's high-content screening services

[Read more](#)



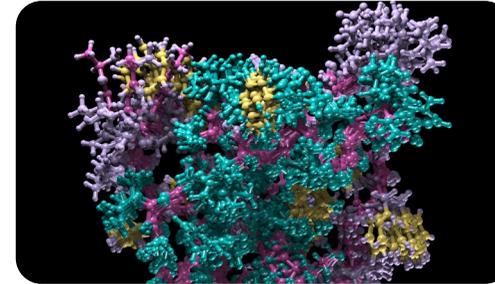
Our research and drug development solutions. Our trusted brands.



Genomic analysis

- Nucleic acid isolation: Chemagic™
- NGS workflows: NEXTFLEX™, Zephyr™, Sciclone™, Fontus™, Mimix™
- Microfluidic nucleic acid analysis: LabChip™
- CRISPR & RNAi gene modulation: Dharmacon™
- Single cell sequencing: DepleteX™
- Translational multi-omics: TotalSeq™
- Base editing: Pin-point™

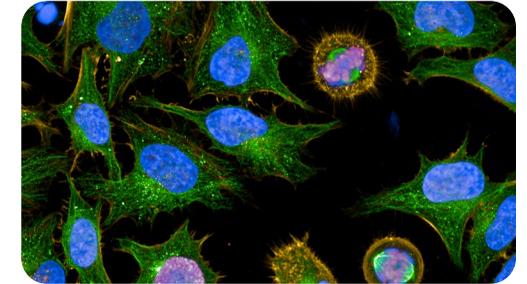
[Learn more](#)



Protein analysis

- Immunoassays: AlphaLISA™, HTRF™, LegendPlex™
- Biomarker identification: DELFIA™, ELISA Max™
- Microfluidic protein analysis: LabChip™
- Recombinant proteins: BioLegend from Revvity
- Radiometric detection: TNEN, SPA, Tri-Carb, MicroBeta
- Microplates and plate readers: EnVision™ Nexus™, VICTOR™ Nivo™

[Learn more](#)



Cell analysis

- Cell counting, health and viability: Cellometer™, Cellaca™, Celigo™
- Cell dissociation & isolation: BioLegend MojoSort™
- Cell lines and media
- Flow cytometry antibodies: BioLegend from Revvity
- Cell imaging and analysis: Operetta CLS™, Opera Phenix™, PhenoVue™
- *In vivo* pre-clinical imaging: IVIS™ Lumina™, IVIS™ Spectrum™, Vega™

[Learn more](#)

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Why work with Revvity's preclinical services team



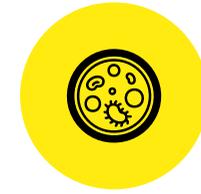
Focus on your core priorities

by outsourcing to our experienced scientific team and leveraging our advanced technologies.



Get reliable data

to support you in making the right models and decisions.



Experience across modalities,

including small molecules, biologics e.g. multispecific antibodies, ADCs, protein degraders, oligo-based therapeutics, and more.



Coverage of preclinical applications,

including target identification, target validation, mechanism of action studies, drug-gene interaction studies, and more.



Experienced scientists,

from nearly two decades of delivering quality preclinical services, and platforms trusted by top pharmaceutical companies for outsourcing oncology cell-based screening projects.

Let's talk!

We'd love to discuss how we can assist with your project.
Get in touch today to arrange a consultation.

Contact us



www.revivity.com

revvity

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