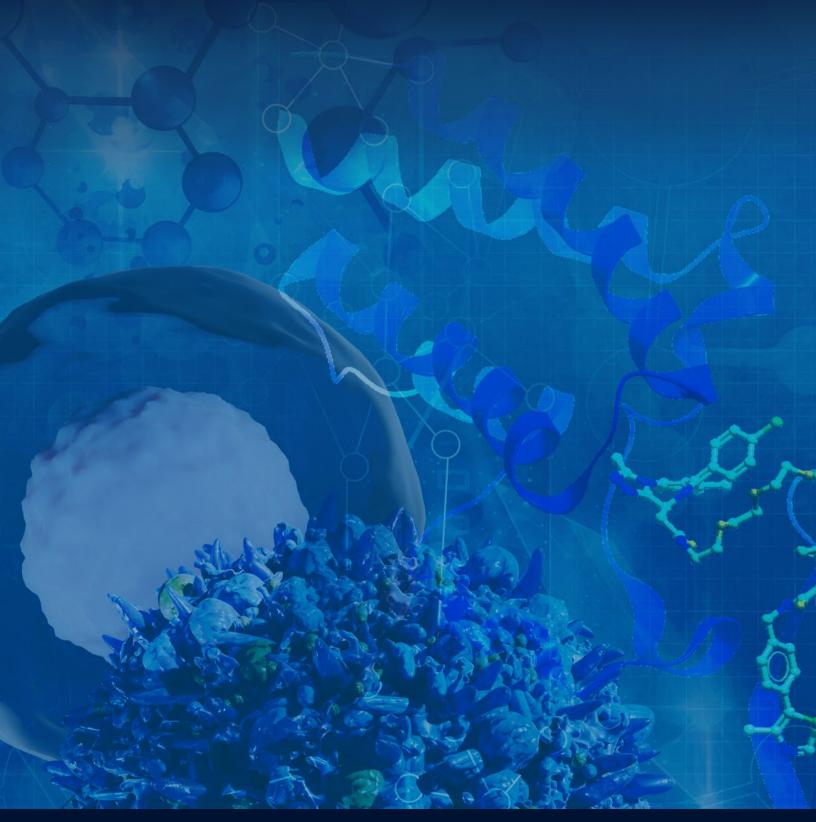
PRODUCT PORTFOLIO OVERVIEW

PARTNERING WITH YOU TO DRIVE DISCOVERY



bio-techne[®]

PROTEINS

Over 3500 biologically active recombinant and natural proteins spanning 35 species.

Ouality

- Stringent quality control specifications for activity, purity, and endotoxin.
- · More citations than any other protein manufacturer.
- · Lot-to-lot consistency.
- · Unmatched customer support.

Selection

- Cytokines, receptors, proteases, and enzymes for metabolism and glycobiology research.
- Tags to meet needs: His, Fc, Biotin, Avi, and more.
- More than 10,000 non-catalog proteins available.
- ProDots® Proteins: Eliminate aliquoting using lyophilized spheres that dissolve instantly in culture.

GMP Cytokines and Growth Factors

- · Made specifically for cell-based clinical manufacturing
- ISO 9001, ISO 13485-certified facility.
- · Animal-free manufacturing
- · Focus on consistency, safety, and supply chain
- · Global experience

Custom Development

- Experience with a wide range of protein classes
- · New proteins from scratch
- · RUO to GMP conversion for ex vivo clinical manufacturing
- · Formulation to meet your requirements
- · Dedicated project managers



Learn more | rndsystems.com/proteins

ANTIBODIES

Over 155,000 antibodies.

• Confidence in Your Purchase.

Our antibodies are 100% guaranteed to work in the application and species listed.

. Unique Clones and Exclusive Antibodies.

Many of our unique clones have been used by HLDA to establish CD nomenclature and we offer over 15,000 antibodies that are available exclusively from us.

Wide Selection of Conjugated Antibodies.

We offer over 50,000 antibodies conjugated to at least 14 complimentary colors.

Monoclonal Antibody Panels

Thousands of non-catalog monoclonal antibodies available now. Test these panels in your application to find the clone that produces optimal results.

Recombinant Antibody Conversion and Engineering Services

We have generated hundreds of recombinant antibodies, as listed in our catalog. Let our experts convert your hybridoma to an immortalized recombinant antibody and even engineer modifications such as species, isotype, and Fc regions.

Custom Antibody Development

Generate custom monoclonal or polyclonal antibodies, from immunogen design to purified antibody specificity screening, by partnering with our expert development team.



Learn more | rndsystems.com/antibodies novusbio.com

SMALL MOLECULES

Over 4,000 high quality chemical tool compounds.

GPCR Ligands, Enzyme Inhibitors, Ion Channel Modulators, Fluorescent Probes & Dyes, Compound Libraries

· Competitive Pricing.

High end products priced to maximize your research budget.

• Be at the Forefront of Research.

From the latest exclusively licensed research tools to established biochemical standards.

Unrivaled Product Quality.

Certified high purity, typically greater than 99% as measured by HPLC.

Fully Annotated Compounds

The biological activity of all products is supported by peerreviewed publications.



STEM CELL AND 3-D CULTURE MODELS

Experts in developing tools for advancing stem cell and 3-D cell culture.

• We Have You Covered

Through isolation, differentiation, verification, and investigation, we have tools to make your stem cell, organoid, and 3-D cell culture more efficient and reliable.

• Minimize Experimental Variability

Reducing experimental variability saves time and allows for more confident data analysis. From stem cell differentiation and verification kits to advanced tools for organoid and 3-D tissue generation, our portfolio helps researchers build consistent and robust cell culture models.

• Don't Wait to Differentiate

Our all-in-one kits for the differentiation of ES/iPS cells, HSCs, MSCs, and NSCs make working with stem cells look easy.

• Evolve Your 3-D Models

Stay at the forefront of 3-D cell culture by using our organoid reagent guide or trying MimEX™ Tissue Model Systems, an innovative technology for generating accessible 3-D epithelial tissue *in vitro*.



Learn more | rndsystems.com/stemcells

CELL CULTURE ESSENTIALS

Grow healthy and robust cells with our full cell culture workflow portfolio.

• Culture with Confidence

From cell culture substrates and media supplements to differentiation and cell behavior kits, our tools for cell culture are designed to ensure that *in vitro* and *ex vivo* experiments will perform optimally.

• Cell Culture Basics by the Best

With the addition of high-quality Atlanta Biologicals™ Fetal Bovine Serum, animal serum, base media, and balanced salt solutions it is easier than ever for researchers to generate media optimized for their cell of choice.

Optimized Kits and Media Supplements

With high-quality growth factors, cytokines, small molecules, and matrix components at our disposal, we've designed specialty media and kits for the growth and differentiation of immune cells, brain cells, stem cells, and more.



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CUSTOM PRODUCTS & CONTRACT SERVICES

Expedite your research.

Partnering with our industry-renowned product development and biomarker testing scientists to deliver unique reagents and reliable data.

• Custom Protein & Antibody Generation

Our recombinant technologies provide gram quantities of consistent proteins and antibodies required for diagnostic and therapeutic reagent development.

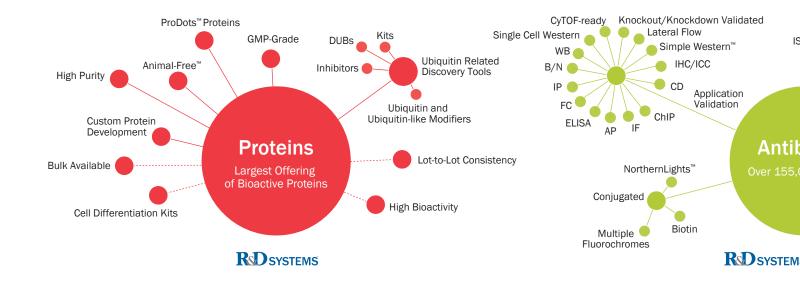
Assay Development

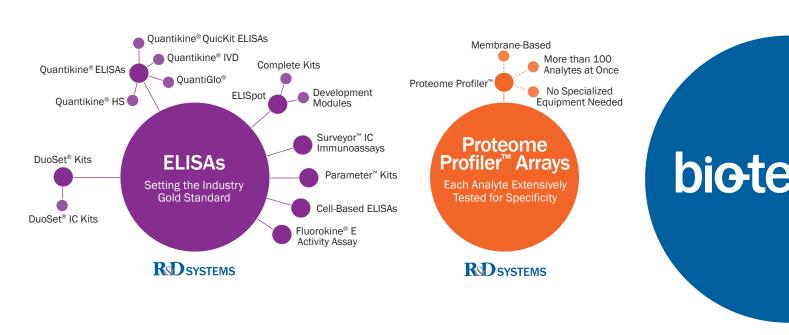
R&D Systems has over 20 years of experience developing, optimizing, and validating immunoassay kits and Luminex® assays to ensure the highest level of performance in analyte quantification.

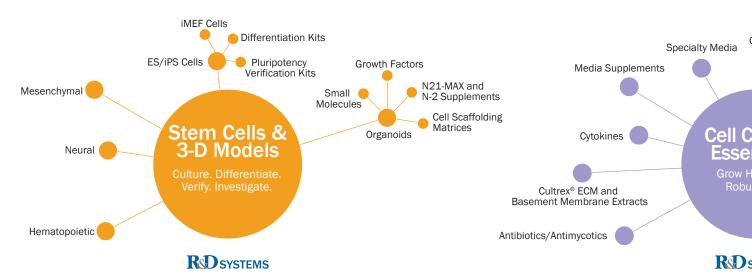
Biomarker & Bioactivity Testing Services

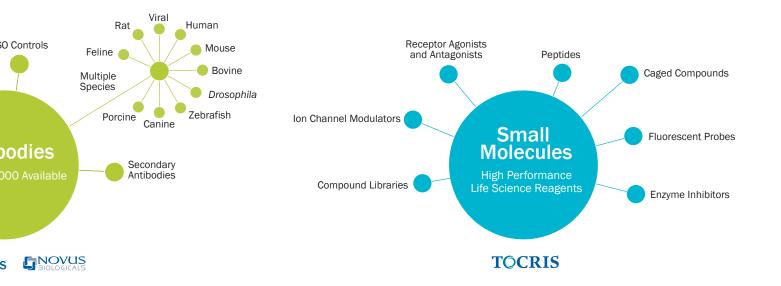
Entrusting our experts with your clinical study samples ensures accurate results that are returned in a timely, efficient, regulatory compliant, and confidential manner.

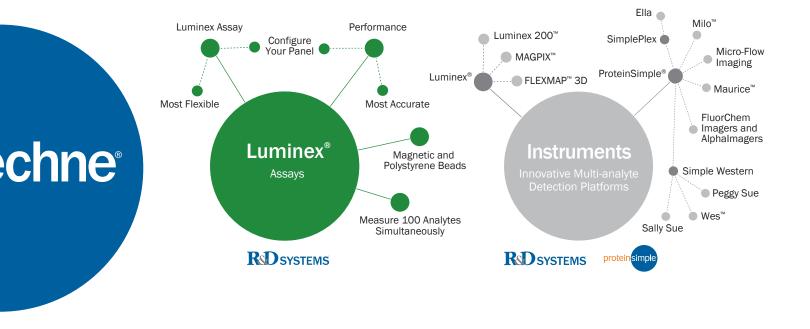


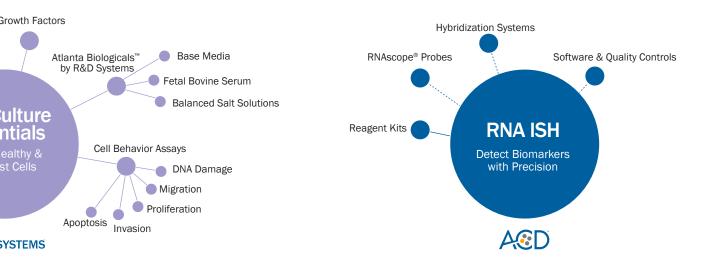












ELISAs

700 analytes spanning 12 species.

• Legendary Performance.

Quantikine® ELISA kits set the industry gold standard in performance and reproducibility. Results today can be compared to last month or even last year.

• Confidence with Controls.

Our assays have available controls with assigned ranges which guarantee performance.

• Economical Alternatives.

Our DuoSet® and DuoSet® Intracellular (IC) ELISA Development Systems provide the best signal-to-noise ratio for value-conscious labs.



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ELISpot

We outperform the competition.

• Be Confident in the Data.

Small, crisp spots all for easier more accurate quantitation and the largest dynamic range (number of detectable spots/well) on the market.

Detect Low Frequency Responses.

Our kits can measure responses with frequencies well below 1 in 100,000 cells – up to 20% more sensitive than our competition.

• Be Assured the Kit Worked.

We are the only company that provides recombinant protein positive controls.



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Choose from Standard or High Performance

· High Perfomance.

Luminex High Performance Assays are the most accurate and precise bead-based multiplex assays for simultaneously measuring up to 45 analytes from customizable panels in qualified complex matrices. You choose if you prefer us to mix the beads or if you want to do it yourself.

. Uniquely Flexible Assay Options.

Our Standard Luminex Assays are the only assays on the market in a premixed format where you choose from a large selection of analytes to create your own unique panel of 50 analytes which are then fully quality controlled for compatibility before shipment.

• Results You Can Trust.

We are the immunoassay experts with 30 years of experience using our internally manufactured antibodies in developing assay conditions and diluents to protect against false positives.

· Complete Your Panel of Analytes.

Take advantage of our massive in-house collection of antibodies and proteins. Complete your panel with a custom development order.



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ANTIBODY ARRAYS

Cast a wide net and stretch your dollar.

• Can You Run a Western Blot?

If the answer is yes, then you have all the equipment you need to use our antibody arrays.

· User-Friendly Design.

Each array is stamped with an identification number for easy record keeping and contains reference spots in three corners for orientation purposes.

· Cost-Effective Screening.

Each array offers a quick and inexpensive analysis of many analytes simultaneously, in less time than it takes to perform a Western blot.



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INSTRUMENTATION

Luminex®

MAGPIX® System

 Simple, compact, affordable, and able to multiplex up to 50 analytes using magnetic beads with a read time of just 60 minutes for a 96-well plate.

Luminex® 200™

 Multiplex up to 100 analytes using polystyrene beads or 80 analytes using magnetic beads with a read time of only 45 minutes for a 96-well plate.

FLEXMAP 3D®

The most advanced and versatile multiplexing platform. Compatible with 96- and 384- well
plates, it reads up to 500 bead regions in both the polystyrene and magnetic formats and
is compatible with front-end automation systems making this the ideal platform for
high-throughput applications.

ProteinSimple®

Ella runs Simple Plex™ assays.

- Run up to 4 immunoassays from 25 uL of sample, with no cross-reactivity.
- Set up samples in 10 minutes, get data in 1 hour.
- Get highly sensitive results at <10% CV.
- Choose from up to 150 validated targets, from cytokines to PD-L1.

Wes[™], Peggy Sue[™] and Sally Sue[™] run Simple Western[™] assays.

- Separation by capillary electrophoresis and immunodetection of proteins from 2–440 kDa or by charge (IEF).
- No gel, blots and minimal hands-on are required.
- Sample to results in as little as 3 hours with Wes.
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Milo™

- Milo does Single-Cell Westerns to measure protein expression in ~1,000 single cells in a single run.
- Multiplex to measure ~4 proteins in each single-cell.
- Use off-the-shelf, Western-validated antibodies to measure intracellular proteins or targets that don't have good flow antibodies.
- Identify cell subtypes that aren't visible in traditional Westerns or get direct protein validation of your single-cell RNA results.

Maurice

- Next generation analytical platform for protein-based biopharmaceutical products.
- · cIEF or CE-SDS data in a snap.
- · Novel native fluorescence detection provides increased cIEF sensitivity.
- Proprietary ready-to-use cartridge for unparalleled ease-of-use.

Micro-Flow Imaging™ (MFI)

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FluorChem™ Imagers and AlphaImagers.

- High quality digital imaging and analysis for protein/DNA gels and Western blots.
- · Cover a wide range of applications, from colony counting to multicolor fluorescent Westerns.
- Easy-to-use, versatile systems with powerful analysis software.
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Luminex® MAGPIX®



Luminex® 200™



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Ella



HIIO MIIO TM



iCE systems: Imaged cIEF & CE-SDS

WHERE SCIENCE INTERSECTS INNOVATION

R&D Systems develops and manufactures high-quality proteins and serves as a world leader in immunoassays. R&D Systems also produces quality antibodies, antibody arrays, stem cell and cell culture products, and cell selection and detection products, serving the life science and diagnostics industry. rndsystems.com

Novus Biologicals licenses, manufactures, and markets antibodies to over 20,000 unique targets to support a wide array of research areas. Novus is built on honesty, collaboration and strong relationships and continues to provide quality tools that accelerate research. Every product is backed by our 100% guarantee. novusbio.com.

Tocris Bioscience is a leading supplier of innovative high performance life science research reagents. The Tocris range of small molecules and peptides represents a unique collection of novel and exclusive research tools, including GPCR ligands, ion channel modulators, enzyme inhibitors, caged compounds, fluorescent probes, and screening libraries.

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ProteinSimple At ProteinSimple we're changing the way researchers analyze proteins. Our innovative product portfolio helps researchers reveal new insight into proteins, advancing their understanding of protein function. We enable cutting-edge research to uncover the role of proteins in disease and provide novel approaches to develop and analyze protein-based therapeutics. We empower you to make your next discovery by eliminating common protein analysis workflow challenges. proteinsimple.com

Advanced Cell Diagnostics (ACD) enables single day manual and automated gene expression analysis by providing optimized singe and multiplex chromogenic and fluorescence assay kits, >15,000 off-the-shelf target probes and pharma assay services based on RNAscope® technology, the most advanced RNA in situ hybridization (ISH) assay which allows researchers to visualize genes expressed at a single molecule RNA sensitivity, localize where they are expressed, and quantify the level of expression. Enabling academic research, drug development, diagnostic and CDx assays, ACD's core applications include cancer, immune-oncology, neuroscience, Infectious disease, stem cell research and gene therapy. RNAscope has reached 1000 peer reviewed publications in less than 6 years.

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