

biotechne®

NEW TOOLS /

# New Tools for Cancer Research



# New Tools for Basic Immuno-Oncology Research

## Meet Pala™, Empowering Cell Line Development for Cancer Research

Traditional cell sorting methods have their challenges when your work calls for simplicity, flexibility, and accessibility. That's why cancer researchers are turning to the Pala single cell dispenser for simplified cell line development workflows and enhanced cloning efficiency.

For scientists engineering new cell lines, the Pala is the only instrument that is simple to use and can rapidly identify and dispense transformed single cells.

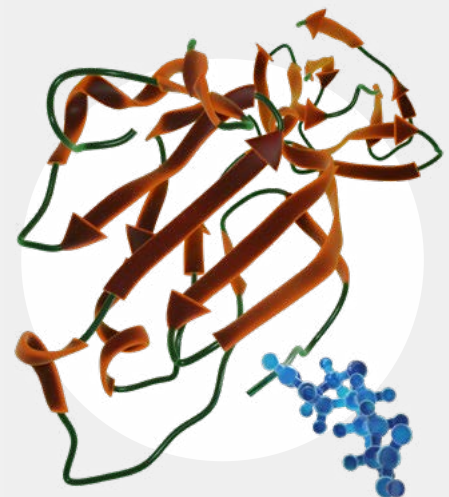


**BROWSE OUR SELECTION**

[bio-techne.com/instruments/single-cell-dispensers](https://bio-techne.com/instruments/single-cell-dispensers)

## Avi-tag and Amine-Labeled Biotinylated Proteins

Biotinylated proteins can be powerful tools for assessing protein-protein interactions or screening antibody or small molecule libraries for potential therapeutics. Rigorous testing ensures R&D Systems™ biotinylated proteins exhibit the same high levels of bioactivity as the corresponding unlabeled proteins, and display minimal lot-to-lot variability. Browse our selection which includes Avi-tag Biotinylated Human CD47, CTLA-4, LAG-3, PD-1, TIGIT, TIM-3, and more.



**EXPLORE BIOTINYLATED PROTEINS**

[bio-techne.com/reagents/proteins/avi-tag-proteins](https://bio-techne.com/reagents/proteins/avi-tag-proteins)

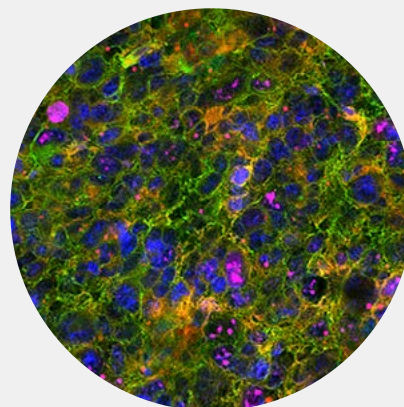
## Expanded Conjugation for Primary Antibodies

Increase the flexibility of your multiplex spatial biology experiments. Easily order any R&D Systems or Novus Biologicals™ primary antibody conjugated to any one of our 28+ fluorescent labels, biotin, or horseradish peroxidase (HRP). Bio-Techne has primary conjugated antibodies validated in over 25 applications to meet your unique research requirements.

- Search your target at [bio-techne.com](https://bio-techne.com)
- Select conjugate option from the drop-down menu
- Receive your antibody in 5-7 business days



SEARCH FOR  
YOUR TARGET  
[bio-techne.com](https://bio-techne.com)

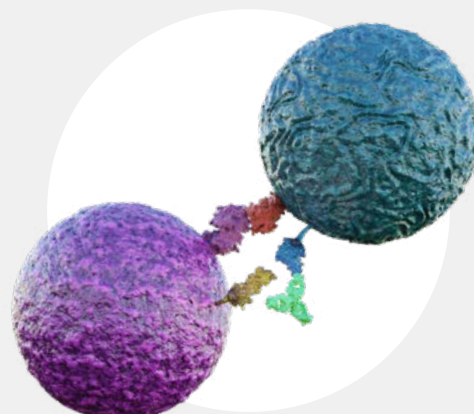


## Efficiently Screen and Validate New Immune Checkpoint Inhibitors

Use R&D Systems™ immune checkpoint proteins and blocking/neutralization antibodies to develop a highly sensitive inhibitor screening assay and confirm the activity of your most promising candidates. Our products provide the performance and consistency needed to advance your drug discovery research.



LEARN MORE  
[bio-techne.com/reagents/proteins/immune-checkpoint-proteins](https://bio-techne.com/reagents/proteins/immune-checkpoint-proteins)

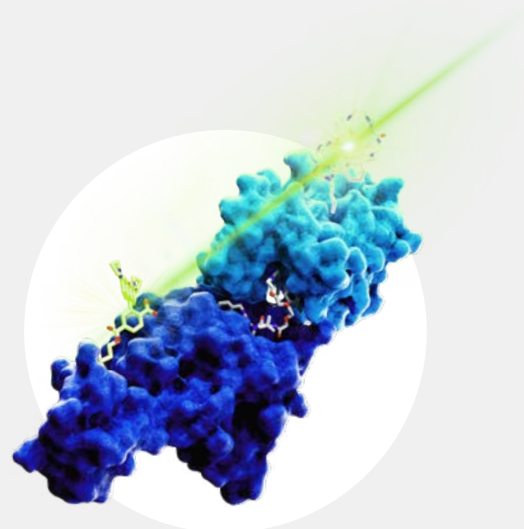


## Experience CoraFluor™ for TR-FRET

CoraFluor is an exceptionally bright, terbium-based TR-FRET donor that is compatible with most acceptor dyes. Conquer the complexities of biomolecular binding with CoraFluor TR-FRET technology, a brighter way to look at protein-protein interactions.



VIEW PRODUCTS  
AND PROTOCOLS  
[bio-techne.com/reagents/tr-fret-and-fp-assay-reagents](https://bio-techne.com/reagents/tr-fret-and-fp-assay-reagents)

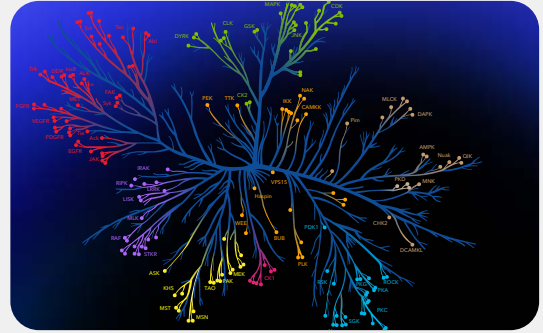


## Tocriscreen™ Kinase Inhibitor Compound Library

A unique collection of 210 curated kinase inhibitors for high-throughput screening, cell-based high content screening, target validation, and assay development.



**VIEW  
PRODUCT DETAILS**  
[bio-techne.com/p/small-molecules-peptides/  
tocriscreen-kinase-inhibitor\\_7844](https://bio-techne.com/p/small-molecules-peptides/tocriscreen-kinase-inhibitor_7844)

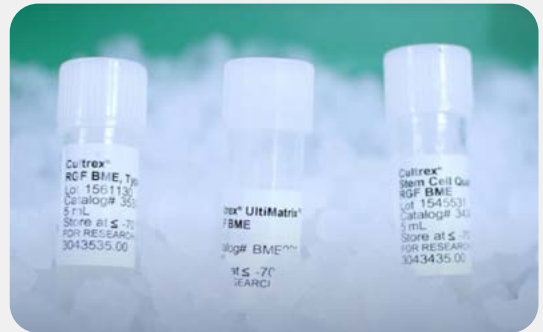


## Cultrex™ BME Extracellular Matrices Mimic Your Cells Native Microenvironment

Whether you are culturing organoids, spheroids, or stem cells, our extensive range of Cultrex Basement Membrane Extracts ensures there is a matrix optimized to fit your research needs. Sample today to discover a more physiologically relevant way to study cell behavior!



**LEARN MORE &  
REQUEST A SAMPLE**  
[bio-techne.com/reagents/cell-culture-reagents/  
cultrex-bme-and-ecm-proteins](https://bio-techne.com/reagents/cell-culture-reagents/cultrex-bme-and-ecm-proteins)

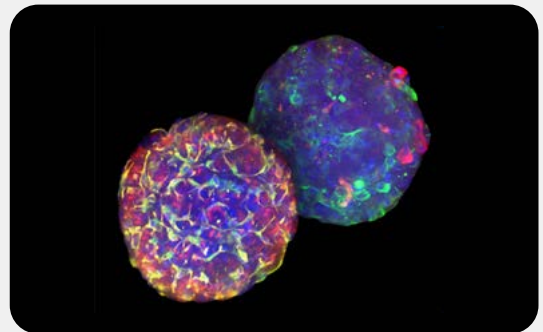


## Tissue Clearing Kits for Organoids and Whole Tissues

These rapid, easy-to-use, reversible, and non-destructive kits allow effective tissue clearing of organoids, 3D cell cultures, and whole tissues, giving unparalleled visualization of labeled targets. The kits come with a comprehensive tissue clearing guidebook, providing detailed protocols.



**VIEW KIT DETAILS**  
[bio-techne.com/p/staining-kits-reagents/tissue-  
clearing-pro-organoid\\_7390](https://bio-techne.com/p/staining-kits-reagents/tissue-clearing-pro-organoid_7390)



## Brighten Your Lab with 4 New Posters!

Our Angiogenesis in Cancer, Cancer Metabolism, Cell Cycle and DNA Damage Repair, and Epigenetics in Cancer posters have all been updated. Guides are also available!



**BROWSE, DOWNLOAD,  
OR REQUEST**  
[tocris.com/literature/literature-request](https://tocris.com/literature/literature-request)



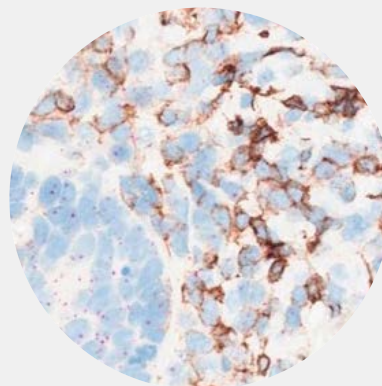
## NEW! Protease-free RNAscope™ 2.5 LS Assay Brown/Red

Our innovative protease-free RNAscope workflow combines the power of *in situ* hybridization (ISH) with downstream immunohistochemistry (IHC) on an expanded menu of antibodies that were previously incompatible with protease-based pre-treatment.



SEE MORE

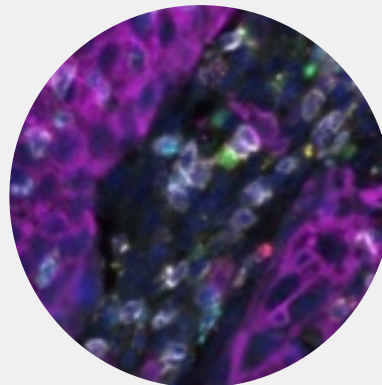
[acdbio.com/rnascope-25-ls-assay-brown](https://acdbio.com/rnascope-25-ls-assay-brown)



## Coming Soon! Protein and RNA on the Same Section: True Multiomics

Advance your spatial program with a new RNAscope assay enabling true multiomic detection.

- Same section protein and RNA detection for deeper biological insights
- Built on class leading RNAscope technology for the best sensitivity and specificity
- Compatible with the Leica Bond Rx



## Coming Soon! RNAscope™ HiPlex Pro for COMET™

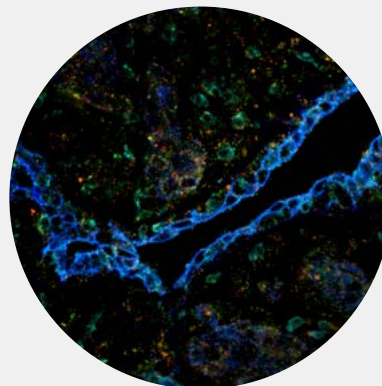
**Fully automated, same-section, spatial RNA and protein detection with subcellular resolution**

COMET enables the simultaneous spatial detection of RNA and protein on the same tissue section using RNAscope™ HiPlex Pro and sequential immunofluorescence (seqIF™) with off-the-shelf, non-conjugated primary antibodies. Thanks to the highly specific and sensitive detection of both targets, COMET provides valuable scientific insights into biomarkers that can be spatially resolved at single-cell level. The streamlined, end-to-end workflow ensures assay reproducibility and saves time in assay development and execution.



LEARN MORE

[lunaphore.com/multiomics](https://lunaphore.com/multiomics)



## See More in 2024 with our Art of RNAscope™ Image Contest!

Share your Spatial Multiomics Art of RNAscope imagery with us and we'll submit them to our ACD 2025 Calendar Contest. If you are using RNAscope, BaseScope™, miRNAscope™ HiPlex™, DNAscope™ and Multiplex or Co-Detection in manual or automated formats, we'd love to get in touch with your inner artist and see more using the full potential of Spatial Multiomics. Submit your image by December 13, 2024.



SUBMIT IMAGE

[acdbio.com/image-contest](https://acdbio.com/image-contest)



# New Tools for Cell Therapy Manufacturing

## Non-Viral Gene Engineering with TcBuster™

Realize the potential of gene engineering by using TcBuster to deliver your genes of interest. Integrate larger cargo sizes than viral-based methods, whilst maintaining high efficiency gene transfer and stable expression. Whether for proof-of-concept or manufacturing, TcBuster is an invaluable tool for engineering immune cells for cancer immunotherapies.



**DISCOVER  
TCBUSTER**  
[bio-techne.com/tcbuster](https://bio-techne.com/tcbuster)



## ExCellerate™ Animal Component-Free Expansion Media

Achieve robust expansion and extended maintenance of your T cells, NK cells, and iPSCs. Made from completely animal-free raw materials, ExCellerate media provides a step toward defined cell culture conditions, delivering high yields with minimal variability.

Seamlessly transition to clinical applications with ExCellerate iPSC Expansion Media, available in equivalent preclinical RUO and GMP-grade formulations.



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REQUEST A SAMPLE**  
[bio-techne.com/reagents/cell-culture-reagents/excellerate](https://bio-techne.com/reagents/cell-culture-reagents/excellerate)

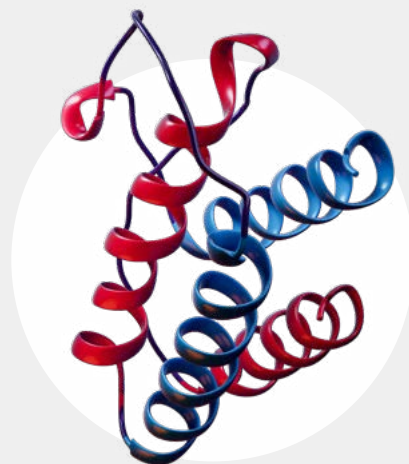


### Animal-Free Preclinical Proteins

Ensure a seamless transition from preclinical research into clinical manufacturing by starting your experiments with Animal-free Preclinical Proteins. R&D Systems™ Animal-free proteins are produced in dedicated animal-free laboratories and are manufactured using the same systems as our GMP-grade proteins. Animal-free protein samples are now available. Start testing!



**LEARN MORE & REQUEST A SAMPLE**  
[bio-techne.com/reagents/proteins/animal-free-proteins](http://bio-techne.com/reagents/proteins/animal-free-proteins)



### Skip Reconstitution with Animal-Free Liquid Cytokines

Streamline your T cell culture workflow with liquid frozen IL-2, IL-7 and IL-15 cytokines. Eliminate the reconstitution step needed with lyophilized proteins, saving time, and reducing errors. Available in both pre-clinical and GMP-grade formats for a seamless transition into clinical manufacturing.



**LEARN MORE & REQUEST A SAMPLE**  
[bio-techne.com/reagents/proteins/liquid-cytokines-workflow](http://bio-techne.com/reagents/proteins/liquid-cytokines-workflow)



### Fluorokines™ Fluorescent-Labeled Proteins

Utilize R&D Systems™ wide selection of fluorescent-labeled proteins to evaluate the expression of chimeric antigen receptors on CAR-T or CAR-NK cells, or sort and detect cells expressing specific immune checkpoint receptors. Fluorescent-labeled proteins are highly specific and allow target molecules to be directly stained and detected by flow cytometry.

#### CAR Detection:

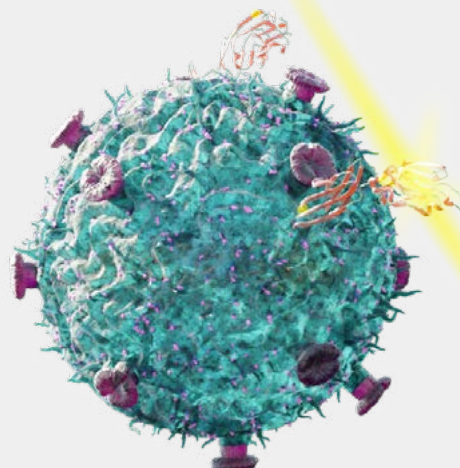
BCMA  
 CD19  
 EGF R  
 Fc gamma RIIIA/CD16a  
 Mesothelin  
 VEGF R2  
 And More!

#### Immune Checkpoint Receptor Detection:

B7-1/CD80  
 B7-2/CD86  
 B7-H4  
 CD155/PVR  
 PD-L1/B7-H1  
 SIRP alpha  
 And More!



**LEARN MORE & REQUEST A SAMPLE**  
[bio-techne.com/reagents/proteins/fluorokines-fluorescent-labeled-proteins](http://bio-techne.com/reagents/proteins/fluorokines-fluorescent-labeled-proteins)



# New Tools for Automated Protein Analytics

## New! High-Throughput 72x2 Multiplexing Cartridge for Ella™

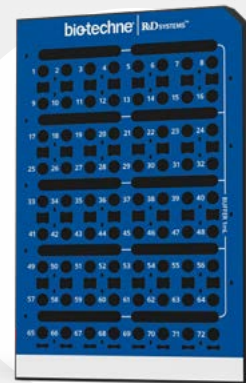
Boost your productivity with the new 72 sample, 2-plex cartridge on Ella, an automated ELISA platform. Choose from a menu of the most common 50+ human cytokines/chemokines to design your 2-plex assay at half the cost of traditional manual immunoassays.

- Increase productivity 4X
- **Reproducible lot-to-lot results:** 72x2 cartridge shows an average CV of <12%
- Eliminate manual error: Hands-free, automated workflow means you just add your sample and walk away



REQUEST  
INFORMATION

[bio-technne.com/p/instruments/simple-plex/request-quote](http://bio-technne.com/p/instruments/simple-plex/request-quote)



## Protein Size, Identity, and Quantitation from Complex Sample Types

Automated, high-throughput, quantitative, reproducible protein analytics in about 3 hours from as little as 3ul of sample.



LEARN ABOUT  
SIMPLE WESTERN™

[bio-technne.com/instruments/simple-western#What%20is%20Simple%20Western](http://bio-technne.com/instruments/simple-western#What%20is%20Simple%20Western)



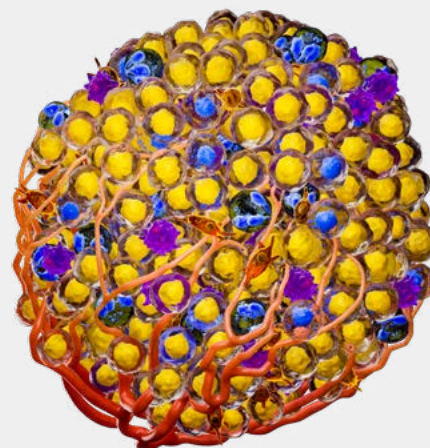


## Human Tumor Biomarker Luminex® Panel - Coming Spring 2024!

This cutting-edge panel allows researchers to analyze 28 critical cancer biomarkers using just 50  $\mu$ L of sample. The panel includes pivotal targets such as CA125, PSA Total, and Neuro-specific Enolase, marking a significant advancement in cancer research.

### Panel Highlights:

- **Wide Sample Compatibility:** Validated for use with serum, plasma (including Streck plasma), cell culture supernates, and lysates
- **Fast Results:** Achieve comprehensive insights in just 3.5 hours, accelerating your research timeline
- **Cancer Population Differentiation:** Enhance multi-early cancer detection strategies by distinguishing between healthy and cancer populations
- **Specific and Sensitive:** Precise and dependable biomarker measurements bolster the reliability of your findings



BE THE FIRST  
TO KNOW

[bio-techne.com/reagents/luminex-assays/new-product-alert](https://bio-techne.com/reagents/luminex-assays/new-product-alert)

# New Tools for Diagnostics

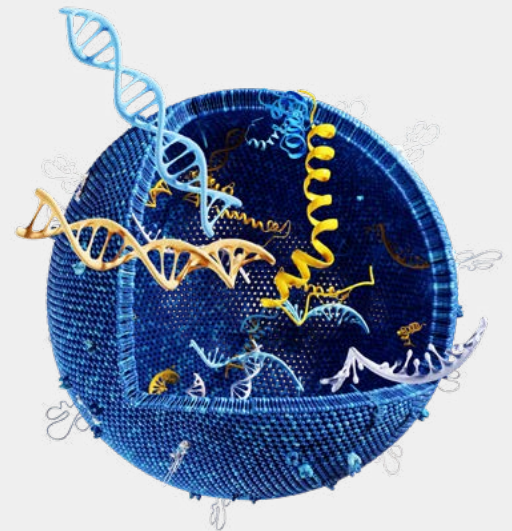
## Bringing High-Sensitivity ESR1 Mutation Testing to qPCR

The QuantideX® qPCR ESR1 exoMutation Kit is paired with the ExoLution™ Plus cfDNA + exoRNA Sample Preparation Kit, leveraging proprietary chemistries from Exosome Diagnostics™ to co-isolate cfDNA + exoRNA in a single workflow. ExoLution Plus includes all the necessary reagents and consumables for high-quality, multi-analyte isolation to power downstream mutation testing.



**LEARN MORE**

[asuragen.com/portfolio/oncology/quantidex-esr1-exomutation-kit](https://asuragen.com/portfolio/oncology/quantidex-esr1-exomutation-kit)



## Visualize the Future of Precision Medicine

Bio-Techne's multiomics platform provides a comprehensive view of disease by combining genomic data with data from other modalities, including transcriptomics, epigenomics, and proteomics. Integrating bioinformatics and machine learning for discovery of multi-analyte biomarker signatures allows a multifaceted view of a patient's disease.



**LEARN MORE**

[bio-techne.com/diagnostics/companion-diagnostics/multiomics](https://bio-techne.com/diagnostics/companion-diagnostics/multiomics)



# Resources

## Solutions for Immuno-Oncology Research

Whether you are investigating immune checkpoint targets, cancer signaling pathways, or the tumor microenvironment, you require reliable, validated reagents to efficiently advance your research. Discover Bio-Techne's wide range of solutions, from bioactive immune checkpoint proteins and rigorously tested blocking/neutralizing antibodies to highly sensitive ELISAs and RNAscope™ ISH assays, our products will provide the performance and consistency needed to advance your drug discovery research.



**LEARN MORE**

[bio-techne.com/research-areas/immuno-oncology](https://bio-techne.com/research-areas/immuno-oncology)

## Solutions for Clinical Immuno-Oncology

If you are facing challenges with consistency, supply, or scalability in your translational studies or therapeutic programs, we have solutions to fit your research needs. Explore how our high-quality raw materials, cutting-edge manufacturing solutions, and precision analytics can help accelerate the development of your immune cell therapy and standardize your analytical processes.



**BROWSE SOLUTIONS**

[bio-techne.com/research-areas/immune-cell-therapy](https://bio-techne.com/research-areas/immune-cell-therapy)

## Wall Poster: Mechanisms of Tumor Evasion and Immunosuppression in the Tumor Microenvironment

The tumor microenvironment (TME) plays a central role in inhibiting anti-tumor immune responses. Learn about the mechanisms by which tumor cells, tumor-derived exosomes, Tregs, myeloid-derived suppressor cells, and tumor-associated macrophages mediate immunosuppression in the TME in our recent poster.



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[bio-techne.com/resources/literature/look-inside-a-tumor-mechanisms-of-tumor-evasion-and-immunosuppression-poster](https://bio-techne.com/resources/literature/look-inside-a-tumor-mechanisms-of-tumor-evasion-and-immunosuppression-poster)



# Where Science Intersects Innovation<sup>®</sup>

**biotechne**<sup>®</sup>

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Analytical Instruments, and Precision Diagnostics.

**INCLUDES** R&D Systems<sup>™</sup> Novus Biologicals<sup>™</sup> Tocris Bioscience<sup>™</sup> ProteinSimple<sup>™</sup> ACD<sup>™</sup> ExosomeDx<sup>™</sup> Asuragen<sup>™</sup> Lunaphore<sup>™</sup>

## Contact Us

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