Cayman CHEMICAL

Assay Kits

Cayman offers hundreds of highly sensitive, robust assay kits in a variety of formats to monitor biomarkers, assess cellular health, screen inhibitors, and measure enzyme activity.

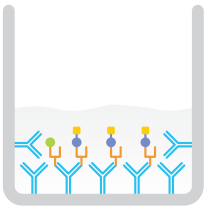
ELISA

Our highly sensitive, non-radioactive assays detect target analytes in cell culture media and biological matrices using competitive, immunometric (*i.e.*, sandwich), or dsDNA sequence-bound approaches.

- Cyclic Nucleotides
- Eicosanoids and Lipids
- Environmental Disruptors
- Hormones
- Immune Signaling Factors
- Transcription Factors

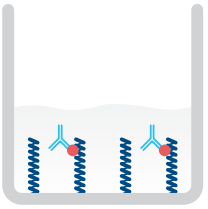
AVAILABLE IN A VARIETY OF FORMATS:

Competitive ELISA



Immunometric ELISA

dsDNA ELISA



Detection Enzymes

Cayman ELISAs employ either HRP, AP, or AChE conjugates as detection reagents. For each assay, our kit developers select one of these conjugates with an assay design-appropriate use in mind.

HRP | *Colormetric Detection Substrate: TMB*

- Rapid, kinetic reaction rate
- Stop reaction and hold at stable signal for up to 1 hour
- Reacts with both soluble and insoluble substrates
- Sensitive

AP | *Colormetric Detection Substrate: pNPP*

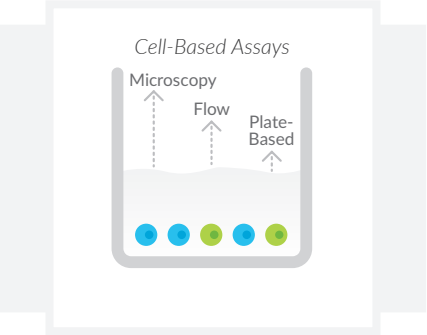
- More sensitive than HRP
- Linear reaction rate
- Stability of staining
- Useful with high levels of endogenous peroxidase

AChE | *Colormetric Detection Substrate: Ellman's reagent*

- Fast turnover rate (3X faster than HRP or AP)
- Active in a wide pH range (pH 5.0-10.0)
- Does not self-inactivate during turnover
- Enables redevelopment if assay is accidentally splashed or spilled

Cell-Based Assays

Our cell-based assays include fully detailed and tested protocols as well as all necessary reagents, including positive or negative controls (where applicable).



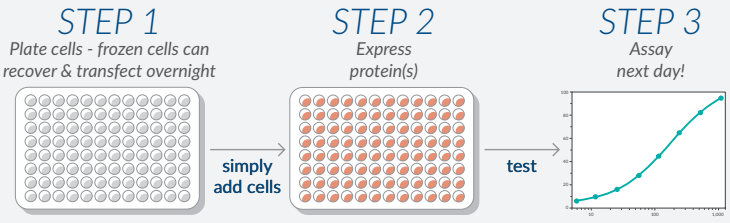
- Nuclear Receptor Activity
- Reactive Species
- Proliferation and Cell Cycle Phase
- Protein Synthesis
- Cell Viability
- Lipid Uptake
- Metabolic Activity
- Neutrophil Activity

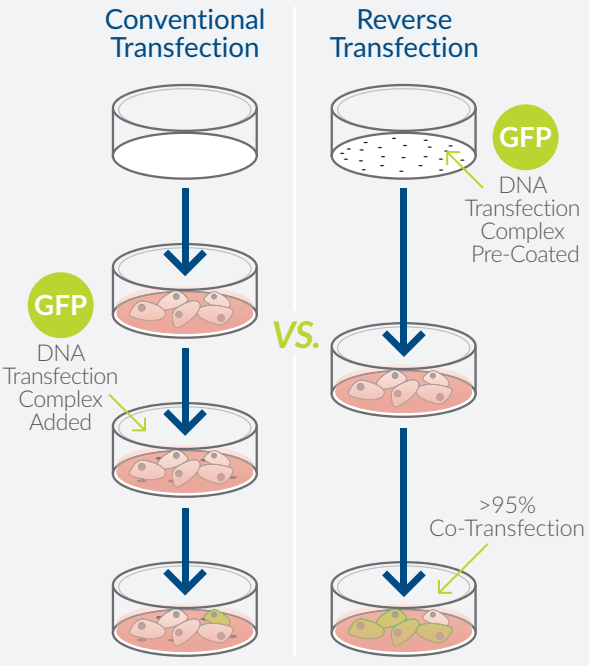
AVAILABLE FOR THE FOLLOWING ASSAY READOUTS:

- *Flow Cytometer*
- *Colorimetric Plate Reader*
- *Fluorescence Microscope*
- *Fluorescence Plate Reader or Time-Resolved Fluorescence*

Reverse Transfection Technology

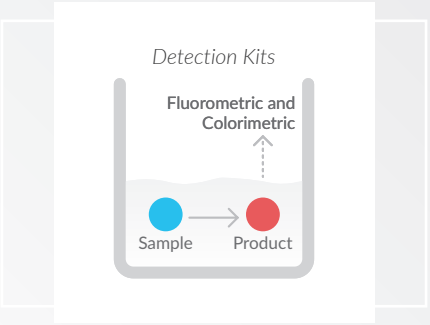
This technology uses plates pre-coated with optimized transfection complexes, offering up to 3-fold increased transfection and >95% co-transfection efficiency (compared to traditional transfection methods) for well to well consistency. This unique system is ideal for rapid assay development and high-throughput screening.





Detection Kits

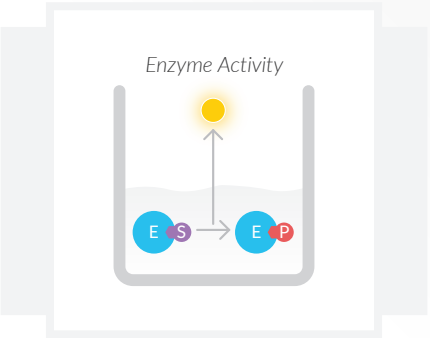
Our detection kits bundle together all the components needed to provide either colorimetric or fluorometric readouts to measure key biomolecules or by-products of their activity by plate-based methods or through immunoblot analysis. These kits serve as highly sensitive indicators, selectively targeting normal biology or disease biomarkers in whole cells, biological fluids, or tissues.



- Cancer
- Cardiovascular Disease
- Cell Biology
- Eicosanoids and Lipids
- Immunology and Inflammation
- Metabolism
- Oxidative Damage

Enzyme Activity

Our enzyme activity assays contain the necessary substrates and indicators needed to drive a specific enzymatic reaction and monitor the rate of activity. As an added convenience, these kits typically include a control compound (*e.g.*, a selective enzyme inhibitor) for distinguishing specific enzyme activity from background signals.



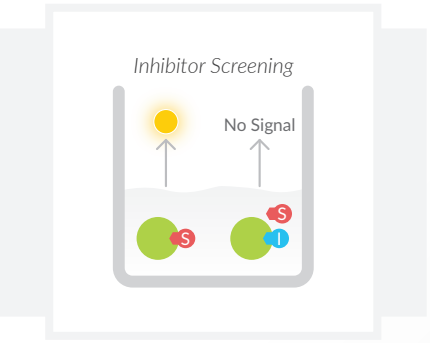
- Cellular Metabolism
- Epigenetics
- Lipid Metabolism
- Mitochondrial Biology
- Oxidative Damage

Assays include

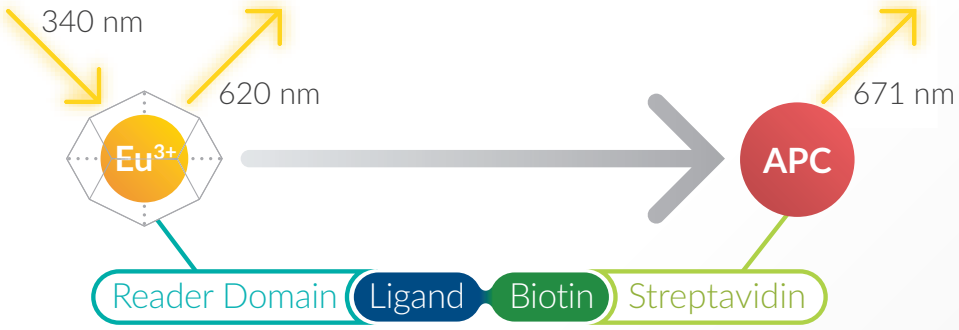
- Positive control compounds (if applicable)
- Negative control compounds (if applicable)
- Substrates, activators, and indicators
- 96-well plate

Inhibitor Screening Assays

Our inhibitor screening assays supply the components needed to obtain a quantitative readout of enzyme activity that can be applied to the identification of small molecule inhibitors from chemical libraries. TR-FRET assay formats are suited to the rapid characterization of ligands for SAR studies of epigenetic compounds in a high-throughput format.



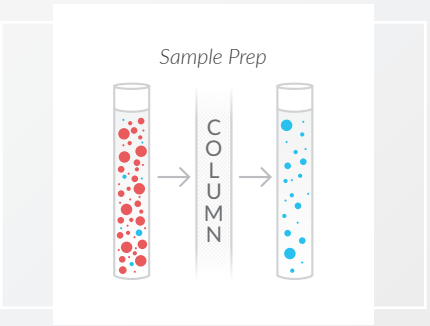
- Nuclear Receptors
- Protein Enzymes (deaminases, peptidases)
- Bromodomains and Tudor Domains
- Epigenetic Enzymes (acetyltransferases, deacetylases methyltransferases, demethylases)
- Lipid Binding Proteins
- Lipid Enzymes (peroxidases, lipases, synthases, cyclooxygenases, lipoxygenases, hydrolases)



TR-FRET Assay

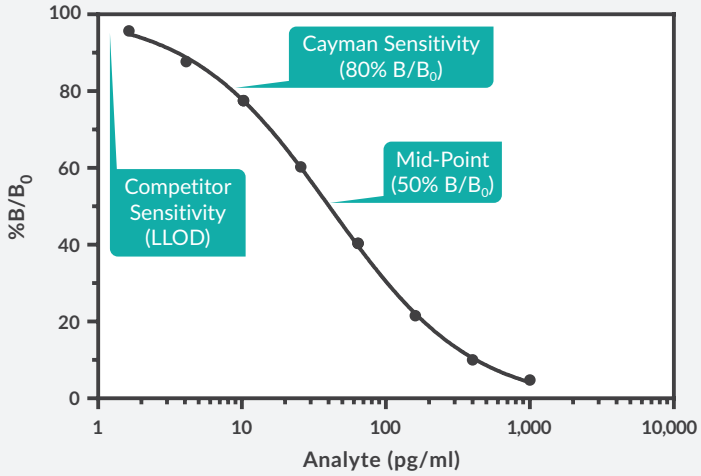
Sample Preparation

Our sample preparation kits and tools supply the reagents needed to optimize and prepare samples for assay analysis.



- IP Columns & Sorbent Cartridges
- Equipment and Consumables
- Sample Collection
- Isolation Kits

Why Choose Cayman Assay Kits?



Assay Range	1.64-1,000 pg/ml
Sensitivity (defined as 80%B/B$_0$)	9.6 pg/ml
Mid-Point (defined as 50%B/B$_0$)	30-70 pg/ml
Lower Limit of Detection	1.0 pg/ml

Measure With Confidence

Each of our assay kits undergoes rigorous quality testing to certify high precision and accuracy to deliver the sensitivity and specificity needed to detect biologically significant analyte levels.

Sensitivity Defined

Because not all assay companies define their sensitivity similarly, we point out the intended definitions of the points of quantitation on the typical standard curves generated by our kits to ensure you reliable, reproducible results.

For more detailed information on how the sensitivity of our kits compares to other commercial assays, visit www.caymanchem.com/news/why-cayman-assay-kits

Results You Can Trust

Our exceptional understanding of assay development, validation, and performance ensures you will obtain reproducible results, from day to day and batch to batch.

Search Less, Research More

Each kit comes with all the necessary reagents, plates, instructions, and analysis tools to help you find answers quickly and efficiently. Our kits are developed by our team of more than 100 scientists, gaining you access to a wealth of technical data and support.

Bioanalytical Services

Our bioanalytical assay services can help you accelerate drug discovery and development, biomarker discovery and development, and basic research. We offer convenient sample analysis and compound screening on a contract basis using our extensive selection of immunoassays, cell-based assays, and detection kits. Our knowledgeable, highly experienced scientific staff will deliver accurate, high-quality data with rapid turnaround and strict confidentiality.

Our screening and profiling services include:

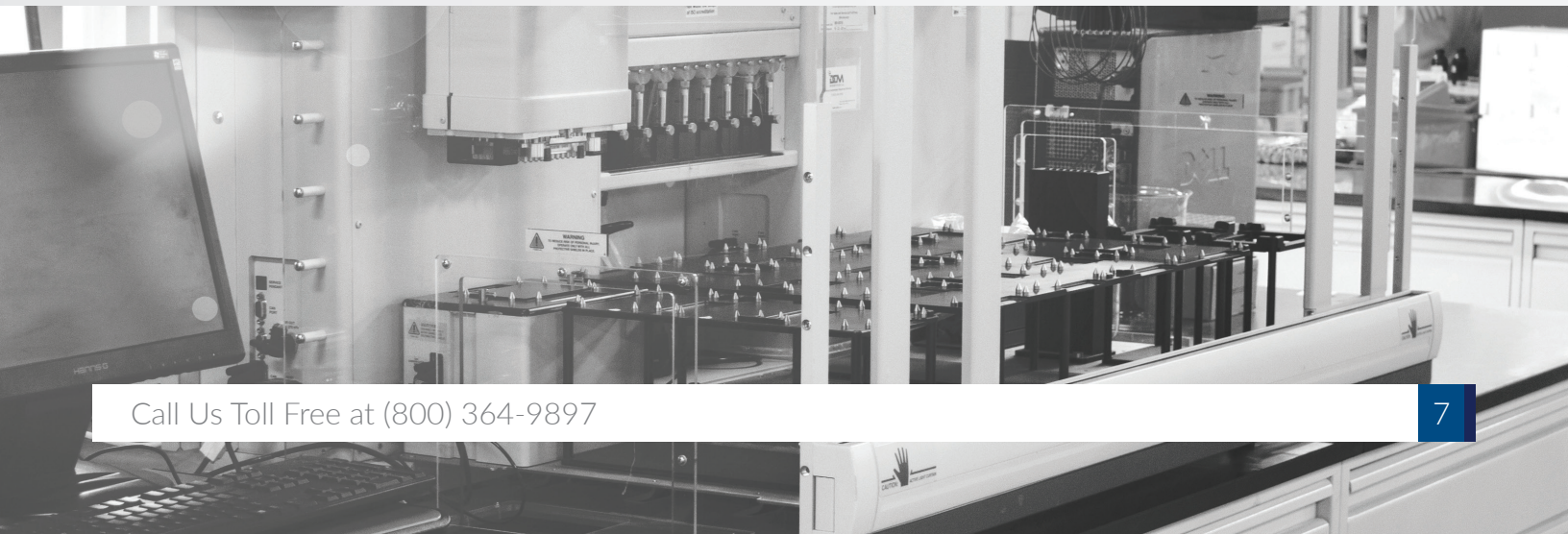
- Mitochondrial bioenergetics profiling
- COX, PAD, epigenetics screening
- MHC peptide sequencing
- Lipid profiling and more...

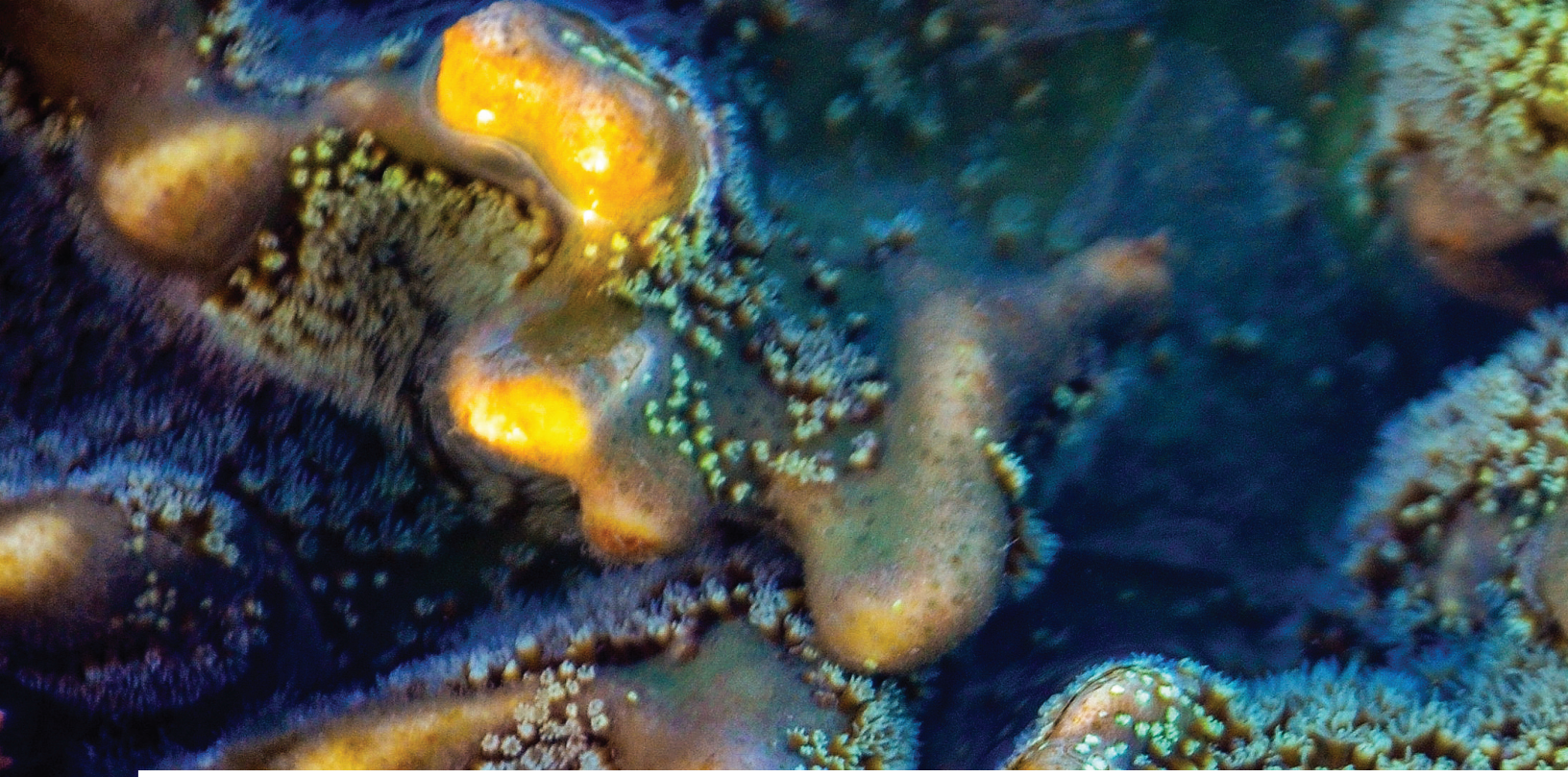
Custom Assay Development

Can't find the perfect assay to fit your research? Leverage our staff's expertise in recombinant protein and antibody production, chemical synthesis and conjugation chemistries, and method development to build an assay that suits your needs.

To learn more about these services, or to discuss your contract research service needs, please contact us.

Email us at contractresearch@caymanchem.com
Visit us online at www.caymanchem.com/services
Call us toll free at (888) 526-5351





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