Promega

High-performance, easy-to-use detection systems to simplify your research

GloMax
SYSTEMS

Ready for Your Research

GloMax® Discover, Explorer and Navigator are state-of-the-art detection readers offering luminescence, fluorescence and absorbance detection capabilities with preloaded protocols and touch screen functionality. They make data analysis easy.

Easy-To-Use

The intuitive touchscreen display, preloaded protocols and automatic instrument gain adjustments make it simple to produce your data and analyze results.

Integrated with Promega Assays

Optimized, preloaded Promega protocols are part of the GloMax® Systems Software, minimizing the time you spend optimizing instrument settings, and ensuring your experiments run smoothly.

Flexible

Select the detection module or modules you need for your assays. The GloMax® Discover and Explorer Systems can be placed on a bench top for standalone use or integrated into a larger automated platform for higher throughput. Whatever your workflow, GloMax® Systems will accommodate your needs.

Superior Performance

The GloMax® Systems provide a broader dynamic range to measure both high and low samples within the same experiment, resulting in better sensitivity for detecting low-level samples and lower well-to-well cross talk. You can be confident in your readings.

World Class Service and Support

GloMax® Systems come with a comprehensive one-year standard warranty, and our expert service team is available to help if you have questions about either the instrument or chemistries. We offer a full line of additional service products, including Installation and Operation Qualification (IQ/OQ).

The Right Instrument for Your Needs

GloMax® Discover, Explorer and Navigator offer a range of detection options. Purchase the instrument and modules you need now. Upgrade your system later as your laboratory needs change.

GloMax® Systems Model	Luminescence	Fluorescence	Visible Absorbance	UV-Visible Absorbance	BRET and FRET
GloMax® Navigator Model GM2000/2010	✔				
GloMax® Explorer Model GM3510	✔	✔	*Upgrade*	*Upgrade**	*Upgrade**
GloMax® Explorer Model GM3500	✔	✔	✔	*Upgrade**	*Upgrade**
GloMax® Discover Model GM3000	✔	✔		✔	✔

***Note:** GloMax® Explorer functionality upgrade to UV absorbance and BRET/FRET are through trade-in for a new GloMax® Discover System. Trade-in must be completed within 1 year of GloMax® Explorer purchase.

Unpack, Plug In and Start Generating Data

We've made it easy for you to quickly set up your GloMax® Detection System and begin collecting and analyzing data, right out of the box.

Automatic Instrument Adjustments

No need to worry about manually adjusting the gain for luminescence reads. GloMax® Systems perform this adjustment for you, providing you with optimized settings.

Reporting

GloMax® Systems software provides many of the required technical elements of a part 11 compliant system (user authentication and authorization, data walk-away integrity and protection, electronic signatures and audit trails) when used with the appropriate laboratory workflow.

Minimal Manual Intervention

Automated filter switching allows you to easily multiplex assays, gaining more data from a single well. Measure cell viability and gene reporter activity with the touch of a button.

Integrated Data Analysis

GloMax® Analysis provides data reduction and curve fit options to easily analyze and interpret your results.

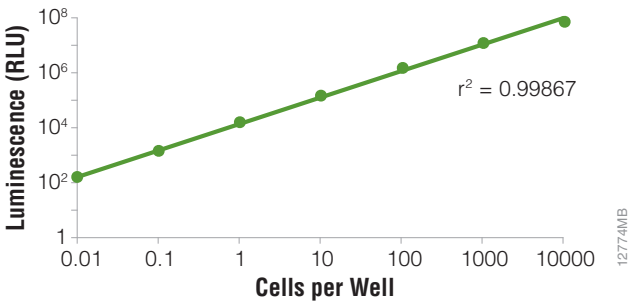


Figure 1. Cell viability assayed using CellTiter-Glo® across a serial dilution range. Results are plotted automatically to provide streamlined assay analysis.

Easy to Use for Your Application

Automatic Filter Slides

- Multiple reads without user intervention
- Easily perform BRET and FRET studies
- Customize filters for your needs

Flexible Interface

- Select a preloaded protocol or customize your own
- Set up a plate map
- View data in a heat map display to quickly identify trends
- Easily export your results to a variety of locations including a local network, web-based cloud, LIMS or any drive desired

Figure 2. Integrated Filter Slides for GloMax® Discover and Explorer.

All	1	2	3	4	5	6	7	8	9	10	11
A	0.000508	0.000491	0.000504	0.000503	0.000483	0.000512	0.000503	0.000503	0.00045	0.000607	0.000472
B	0.00196	0.00207	0.00207	0.00203	0.00178	0.00181	0.0019	0.00187	0.00151	0.00139	0.00124
C	0.00207	0.00215	0.00211	0.00207	0.002	0.00196	0.002	0.0019	0.00134	0.00152	0.00146
D	0.00203	0.00221	0.00224	0.00215	0.002	0.00205	0.00212	0.00194	0.00156	0.00144	0.00166
E	0.00209	0.0025	0.00248	0.00239	0.00225	0.00236	0.00226	0.00222	0.00188	0.00177	0.00188
F	0.00242	0.00254	0.00279	0.00278	0.00287	0.00295	0.00278	0.0028	0.00225	0.0022	0.00221
G	0.00277	0.00296	0.00291	0.00305	0.00313	0.00307	0.00311	0.00304	0.00283	0.00287	0.00278
H	0.00284	0.00302	0.00306	0.00306	0.00291	0.0029	0.00301	0.00267	0.00293	0.00281	0.00309

Figure 3. Heat Map Display.

Figure 4. Drag and Drop Protocols.

Integrated with Promega Assays

GloMax® Detection Systems offer superior performance for a wide array of assays for your research. The sensitivity, broad dynamic range and low well-to-well cross talk provide you with more usable and relevant data.

Whether you study cell health, monitor cell viability or toxicity, or assay signaling pathways, GloMax® Systems produce data you can use. Are you developing drug candidates and monitoring kinase activity? These Detection Systems are ready to support your research. GloMax® Systems also detect readout from Promega bioassays and evaluate monoclonal antibody activity.

Developed and Optimized at Promega

- Use the 50 preloaded protocols, or customize your own
- Optimized settings to achieve the best results, producing data more quickly
- Protocols available for:
  - Nucleic acid quantitation for next-generation sequencing
  - BRET and FRET for protein interaction analysis
  - Kinase and cell signaling assays
  - Multiplexing assays
  - Cell-based assays
  - Reporter gene assays
  - Bioassays
  - ELISAs

Figure 5. Select your protocol of interest from the preloaded list.

The Versatility and Performance You Need

Multiplex Assays

Easily read multiplexed cell viability, apoptosis and cytotoxicity assays.

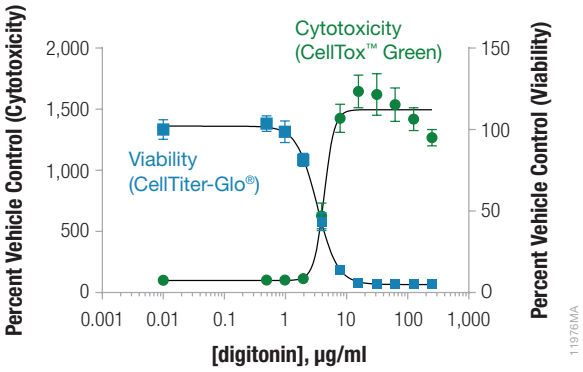


Figure 6. Multiplexed cytotoxicity and viability assays performed on digitonin-treated K562 cells.

Screen Kinase Inhibitors

Efficiently read the output of kinase inhibitor screening and automatically analyze results.

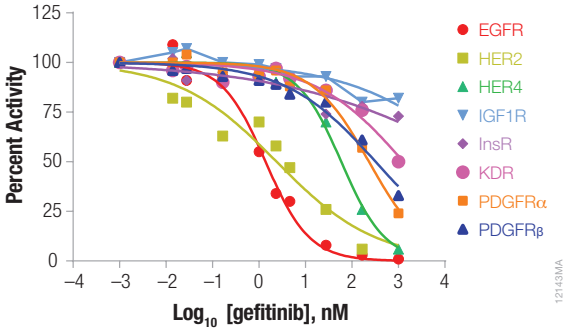


Figure 7. Receptor tyrosine kinase inhibition was assessed following incubation with gefitinib, a selective inhibitor of EGFR, using the ADP-Glo™ Kinase Assay.

Assess Reporter Bioassays

Detect luminescence from Promega bioassays and evaluate mAb activity.

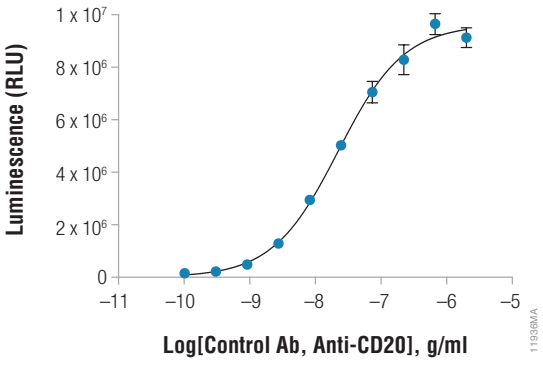


Figure 8. ADCC Bioassay Target cells were incubated with a series of concentrations of Control Ab, Anti-CD20, followed by addition of ADCC Bioassay Effector Cells.

Study Protein:Protein Interactions

Analyze the interaction of proteins using BRET.

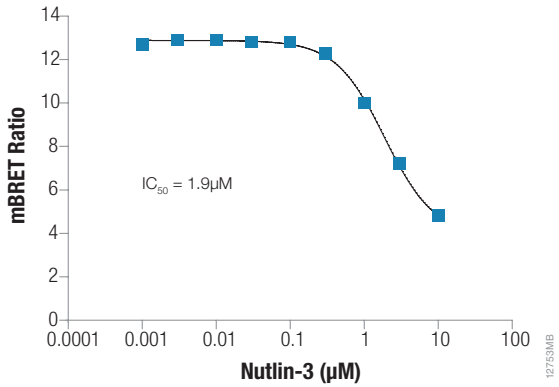


Figure 9. A dose-response curve showing the disruption of the p53 and MDM2 interaction using the inhibitor Nutlin-3 in a NanoBRET™ assay.

Flexibility to Use Alone or as Part of an Automated Workflow

The GloMax® Detection Systems can be used on a bench top or integrated into your automated workflow for higher throughput and walk-away operation.

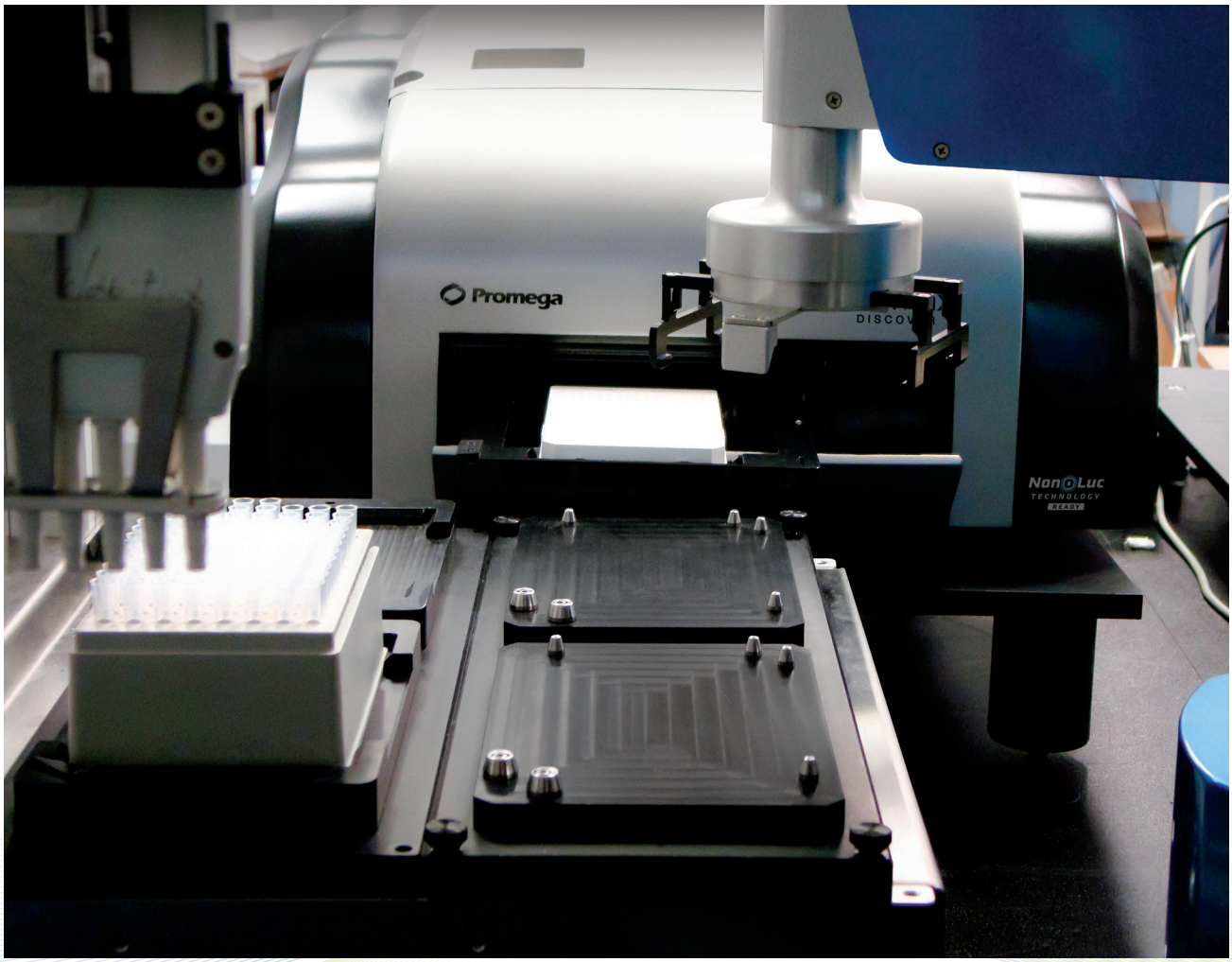
Automation Ready

GloMax® Systems can be controlled by third-party scheduling software with liquid handling and plate stackers to give you complete, walk-away automation. The software is SiLA compatible, making integration device control simple as SiLA standards evolve.

SiLA Rapid Integration®

Third Party Integration

The GloMax® Systems can be integrated with Tecan Freedom EVO®, Hudson Robotics Solo™ and PlateCraneEX™, Hamilton Microlab® STAR series, and many other hardware systems.



GloMax® Navigator Specifications

Luminescence

- Low-noise PMT ensures collected light is not compromised
- 10 to 1,000 times more sensitive than competitor instruments
- No need to dilute samples or manage gain settings
- 2 to 3 logs more usable data than competing instruments
- Lower cross talk for more usable data

Luminescence Module Specifications

Detector	Top-reading, head-on photon counting photomultiplier tube (PMT)
Wavelength Range	350–700nm
Detection Limit	1.5×10^{-21} moles of luciferase
Linear Dynamic Range	9 logs
Cross talk	Less than 3×10^{-5} (white, 96-well plate, Corning 3912)

Injector System Specifications

Number of injectors (optional)	Two injectors
Dispense Volume Range	5–200µl in 1µl increments
Plate Compatibility	96-well plates
Waste Collection Tray Volume	Approximately 50ml
Void Volume	500µl

GloMax® Discover and Explorer System Specifications

Luminescence

- Low-noise PMT ensures collected light is not compromised
- 10 to 1,000 times more sensitive than competitor instruments
- No need to dilute samples or manage gain settings
- 2 to 3 logs more usable data than competing instruments
- Filtered luminescence readout for BRET or multi-wavelength distinction (for GloMax® Discover only) or total luminescence
- Lower cross talk for more usable data
- Five filters included for BRET and filtered luminescence assays such as NanoBRET®, *Renilla*/YFP BRET and Chroma-Glo™ (for GloMax® Discover only)
- Or, customize all 5 luminescence filters to your needs (for GloMax® Discover only)

Luminescence Module Specifications

Detector	Top-reading, head-on photon counting photomultiplier tube (PMT)
Wavelength Range	350–700nm
Detection Limit	3×10^{-21} moles of luciferase
Linear Dynamic Range	9 logs
Cross talk	Less than 3×10^{-5} (white, 96-well plate, Corning 3912)
Filtered Luminescence	GloMax® Discover: built-in filter paddle

Fluorescence

- Uses powerful wavelength-matched, light-emitting diodes (LED) as excitation sources
- LEDs closely match excitation profiles of commonly used fluorescent molecules to ensure high sensitivity
- Reduces nonspecific light leakage, a common problem when using broad-spectrum light sources
- Five excitation and emission filters included for common fluorescence assays; plus 1 customizable excitation and emission position
- Or, customize two fluorescence excitation positions or all 6 emission positions to your needs

Fluorescence Module Specifications

Detector	PIN-photodiode
Light Source	Wavelength-matched LED
Read Position	Top reading
Wavelengths selection	Filter module with 5 standard excitation and emission filters. Empty filter positions are available for custom excitation and emission wavelengths.
Wavelengths included	UV (Ex: 365nm, Em: 415–445nm) Blue (Ex: 475nm, Em: 500–550nm) Green (Ex: 525nm, Em: 580–640nm) Red (Ex: 625nm, Em: 660–720nm) AFC (Ex: 405nm, Em: 495–505nm)
Detection Limit	2fmol fluorescein/200µl
Linear Dynamic Range	>6 logs (assay dependent)

Absorbance

- GloMax® Discover comes factory installed with 9 UV-Visible filters for common colorimetric assays
- GloMax® Explorer GM3500 comes factory installed with 5 Visible Absorbance filters
- Ideal for ELISA, protein and nucleic acid assays

UV-Visible Absorbance Module Specifications

Detector	Top-reading, head-on photon counting photomultiplier tube (PMT)
Light Source	Xenon flash lamp
Spectra Range	200–600nm
Filter Wheel	GloMax® Discover: 9 absorbance filters included GloMax® Explorer: 5 absorbance filters
Wavelengths included	GloMax® Discover: 230, 260, 280, 320, 405, 450, 490, 560 and 600nm 10nm bandwidth GloMax® Explorer: 405, 450, 490, 560 and 600nm 10nm bandwidth
Detection Limit	0.1 O.D.
Dynamic Range	0–4.0 O.D.

Single-Source Service and Support

GloMax® Systems are all backed by a comprehensive one-year standard warranty, and our expert technical and service support teams.

One Call Supports It All

We supply both the reagents and the instrument, so one call to Promega technical support answers any questions you may have about assay chemistries or instrument performance.

Expert support, instrument loan programs and service packages ensure minimal downtime. Additional warranty and service agreements are available for coverage beyond the one-year standard warranty.

To learn more about our extensive service products visit: **www.promega.com/GloMaxService**

Ordering Information

Product	Size	Cat.#
GloMax® Discover System *Configured with Luminescence, Fluorescence and UV-Visible Absorbance*	1 each	GM3000*
GloMax® Explorer System *Configured with Luminescence, Fluorescence and Absorbance*	1 each	GM3500*
GloMax® Explorer System *Configured with Luminescence and Fluorescence*	1 each	GM3510*
GloMax® Navigator System *Configured with Luminescence and Dual Injectors*	1 each	GM2010*
GloMax® Navigator System *Configured with Luminescence*	1 each	GM2000*

*Comes with U.S. Instrument and Tablet PC power cords.

To see the full line of GloMax® Instruments, Accessories and Service Products, visit www.promega.com/GloMaxSystems

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