

GloMax[®] Multimode Plate Readers



Ready for your research

GloMax® Discover, Explorer and Navigator are state-of-the-art multimode plate readers offering luminescence, fluorescence and absorbance detection capabilities with preloaded protocols and touchscreen 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. GloMax microplate readers can be placed on a bench top for stand alone use or integrated into a larger automated platform for higher throughput. Whatever your workflow, GloMax Systems will accommodate your needs.

Superior performance

GloMax instruments provide a broader dynamic range to measure samples emitting both high and low intensity signals within the same experiment. This results in better sensitivity for detecting low-level samples and lower well-to-well crosstalk. 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), annual Service Agreements and Preventative Maintenance services.



The right instrument for your needs

GloMax Discover, Explorer and Navigator offer a range of detection options:

GloMax® Model	Luminescence	Fluorescence	Visible Absorbance (385-600nm)	UV-Visible Absorbance (200-600nm)	BRET/FRET
GloMax® Navigator Model GM2000/ GM2010	✓				
GloMax® Explorer Model GM3510	✓	✓	GM3520		
GloMax® Explorer Model GM3500	✓	✓	✓	GM3560	GM3570
GloMax® Discover Model GM3000	✓	✓		✓	✓

Accurate results from every well



Superior sensitivity so you don't miss hits

GloMax microplate readers offer superior sensitivity and auto-gain adjustment, letting you measure weak and strong signals on the same plate.

Masking so crosstalk doesn't mislead your results

The masking design of GloMax plate readers means that you can be confident that the results from each well are not skewed by signal from neighboring wells.

Broad detection range so you don't limit your experiments

With the broad detection range of GloMax instruments, you can measure signals ranging from high intensity to near physiological levels.

Unpack, plug in and start generating data

We've made it easy for you to quickly set up your GloMax 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

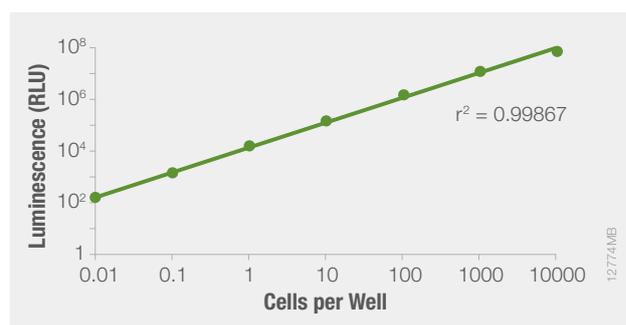
GloMax Software provides many of the required technical elements of a part 11 compliant system (user authentication and authorization, data walk-away integrity and protection, electronic signatures and audit trails) when used with the appropriate laboratory workflow.

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 SMART Protocols provide additional data analysis options. Easily measure and analyze your results using the intuitive, preloaded software.



Cell viability assayed using CellTiter-Glo® across a serial dilution range. Results from this SMART Protocol 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



Integrated filter slides.



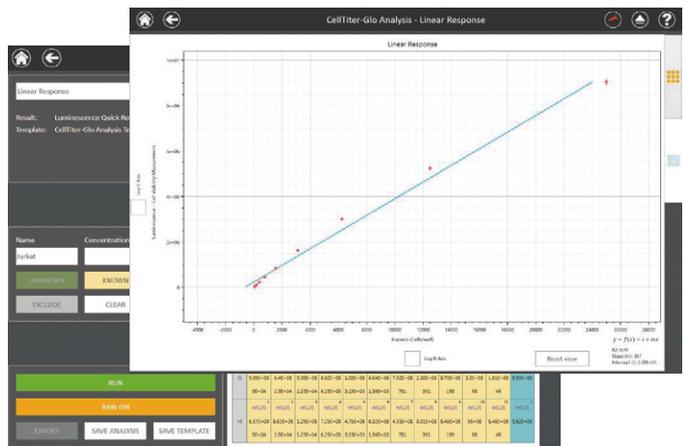
Heat map display.



Drag and drop protocols.

Integrated data analysis

- Analyzes include:
 - Linear Standard Curve
 - Linear Response Curve
 - Dose Response EC50 / IC50
 - Ratiometric
- Customize X/Y labels and chart titles
- Graph using Log or Linear axis
- Export raw data, analyzed data, chart and formulas into Microsoft Excel
- Retain data within GloMax Software under part 11 control.

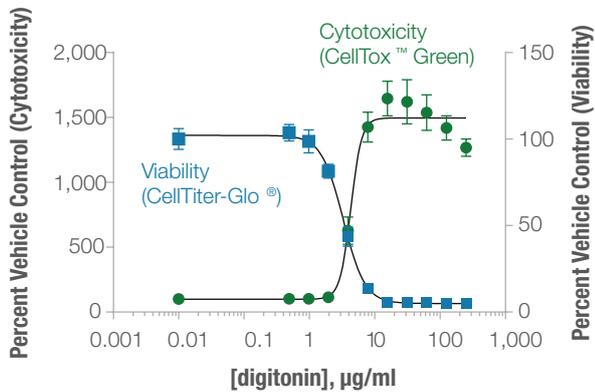


GloMax analysis software.

The versatility and performance you need

Multiplex assays

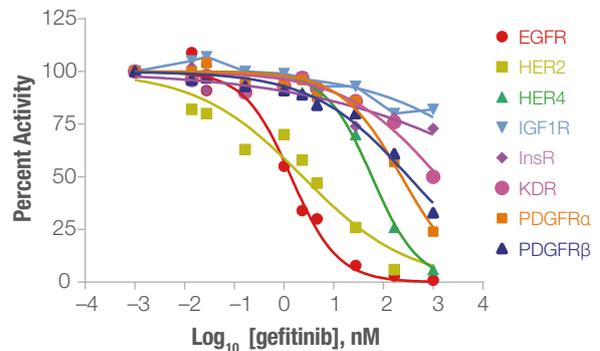
Easily read multiplexed cell viability, apoptosis and cytotoxicity assays.



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

Screen kinase inhibitors

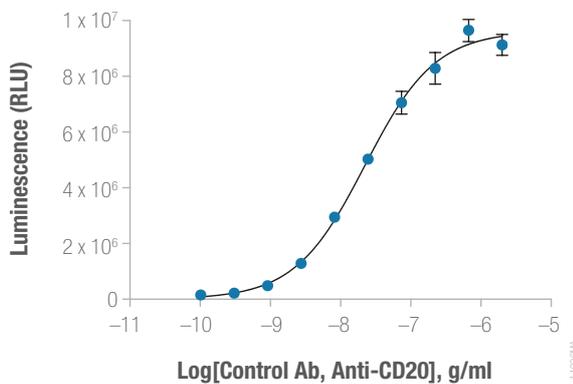
Efficiently read the output of kinase inhibitor screening and automatically analyze results.



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

Assess reporter bioassays

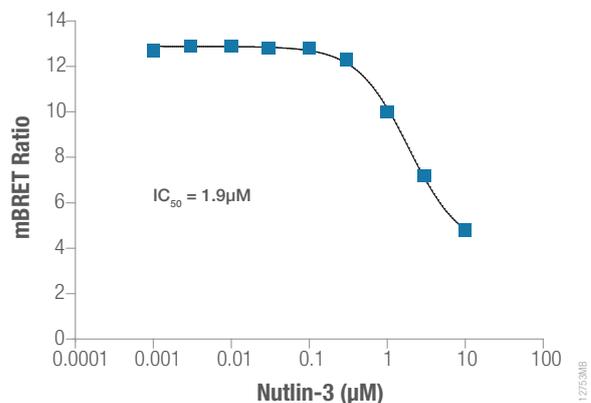
Detect luminescence from Promega bioassays and evaluate mAb activity.



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.



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

GloMax[®] Discover and Explorer System specifications

Instrument specifications

Detection modes	Luminescence, fluorescence, absorbance Discover only: UV-visible absorbance, filtered luminescence, BRET and FRET
Sample format	6-, 12-, 24-, 48-, 96- and 384-well plates
Heating system	Ambient +5°C to 45°C
Shaking system	Linear or orbital patterns

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
- Dual injectors with pump station available (GM3030).

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
Crosstalk	Less than 3×10^{-5} (white, 96-well plate, Corning [®] Cat.# 3912)
Filtered luminescence	Built-in filter paddle containing five filters for BRET or multi-wavelength distinction (GloMax Discover only) or total luminescence



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 non-specific light leakage, a common problem when using broad-spectrum light sources

Fluorescence module specifications	
Detector	PIN-photodiode
Light source	Wavelength-matched LED
Read position	Top-reading
Wavelengths selection	Filter paddle with 5 standard excitation and emission filters. Empty filter positions are available for custom excitation and emission wavelengths (above 365nm)
Wavelengths included	UV (Ex: 365nm, Em: 415–445nm), Blue (Ex: 475nm, Em: 500–550nm), Green (Ex: 520nm, Em: 580–640nm), Red (Ex: 627nm, Em: 660–720nm), AFC (Ex: 405nm, Em: 495–505nm)
Detection limit	2 fmol 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 comes factory installed with 5 Visible absorbance filters
- Ideal for ELISA, protein and nucleic acid assays

Absorbance module specifications	
Detector	Top-reading, head-on photon counting photomultiplier tube (PMT)
Light source	Xenon flash lamp
Spectral range	GloMax Discover: 200-600nm (UV-Vis) GloMax Explorer: 385-600nm (Vis)
Filter wheel	GloMax Discover: 9 absorbance filters included GloMax Explorer: 5 absorbance filters included
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.

GloMax[®] Navigator System specifications

Instrument specifications

Detection modes	Luminescence
Sample format	96-well plates

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 crosstalk 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
Crosstalk	Less than 3×10^{-5} (white, 96-well plate, Corning [®] Cat.# 3912)

Injector system specifications

Number of injectors (optional)	Two injectors
Dispense volume range	5–200 μ l in 1 μ l increments
Plate compatibility	96-well plates
Waste collection tray volume	Approximately 50ml
Void volume	500 μ l

Service and support

One less thing to worry about!

We know you are busy. To help you maximise productivity in your lab, we are here to help keep your detection instruments running smoothly. With our comprehensive menu of service and support options you have one less thing to worry about. Promega helps ensure that your equipment is working correctly and is ready when you need it.

Service packages

Standard Warranty

This is included in the system price and is valid for one year, covers all parts, labour and shipping to and from our depot repair location. We will repair your instrument and return it to you performing to original factory specifications.

Standard Service Agreement

After the warranty period is over, you can continue to receive the same comprehensive service and support as you did when your system was under warranty. This covers all parts, labour and shipping to and from our depot repair location. If your GloMax Instrument needs repair, we will provide a box for shipment of the instrument back to our service facility. We will repair it and return it to you performing to original factory specifications.

Preventive Maintenance

In order to keep the system operating at peak performance, Promega recommends that GloMax Instruments receive a Preventative Maintenance check after 12 months of use. During this procedure, our qualified service personnel test the instrument, check parts for wear and replace them as needed (please note the cost of these replacements is not covered in the PM cost). The preventive maintenance service is performed by returning the instrument to the factory.

Installation Qualification

This provides a series of formal on-site instrument checks, delivers written documentation of instrument functionality, and demonstrates that everything ordered with your instrument is supplied and installed in your laboratory. Upon delivery to the lab, the instrument and its components will be visually inspected and reviewed for completeness. Following the inspection, the instrument will be powered on to confirm that the system is properly functional.

Operational Qualification

This demonstrates that the instrument will function according to its operational specifications. An instrument specialist will check the instrument's alignment and then perform an operational test run to ensure that all of the hardware modules function correctly. Following the documentation of these tests, familiarisation training with the instrument's operators will occur. The specialist will also explain all of the sections of the instrument log book.



Single-source service and support

GloMax Systems are 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 programmes 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	
GloMax® Discover System <i>Configured with Luminescence, Fluorescence, UV-Visible Absorbance and BRET/FRET</i>	GM3000
GloMax® Explorer System <i>Configured with Luminescence, Fluorescence and Visible Absorbance</i>	GM3500
GloMax® Explorer System <i>Configured with Luminescence and Fluorescence</i>	GM3510
GloMax® Navigator System <i>Configured with Luminescence</i>	GM2000
GloMax® Navigator System <i>Configured with Luminescence and Dual Injectors</i>	GM2010

Accessories and upgrades

Product	
GloMax® Dual Injectors with Pump Station	GM3030
GloMax® Discover Luminescence Filter Paddle	GM3011
GloMax® Discover Fluorescence Filter Paddle	GM3012
GloMax® Explorer (GM3510) Visible Absorbance Module Upgrade	GM3520
GloMax® Explorer (GM3500) Upgrade to UV-Visible Absorbance Capability	GM3560
GloMax® Explorer (GM3500) Upgrade to BRET/FRET Capability	GM3570

Products may be covered by pending or issued patents or may have certain limitations. Please visit our Web site for more information.

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