Promega

# GloMax DISCOVER

A high-performance, easy-to-use multimode reader for luminescence, fluorescence, absorbance, BRET and FRET applications.

# The Perfect Partner for Promega Assays

## Easy-To-Use

Choose from preloaded Promega protocols or customize your own protocol. Export data to a network, cloud, LIMS or any drive desired.  Easily perform luminescent, fluorescent, UV-visible absorbance, BRET and FRET measurements.

## Automation-Ready

Integrate into your automated workflow for higher walk-away throughput or into your LIMS data management system.

## Superior Sensitivity

Broader dynamic range, better sensitivity and lower well-to-well cross talk for more usable data.

## Service

Full-service products are available to meet your needs including Installation Qualification (IQ) and Operational Qualification (OQ).

## Minimal Manual Intervention

Automated filter switching allows easy multi-assay detection.

## Cost Effective

Preloaded protocols save time on assay optimization; less hands-on time conserves personnel resources.

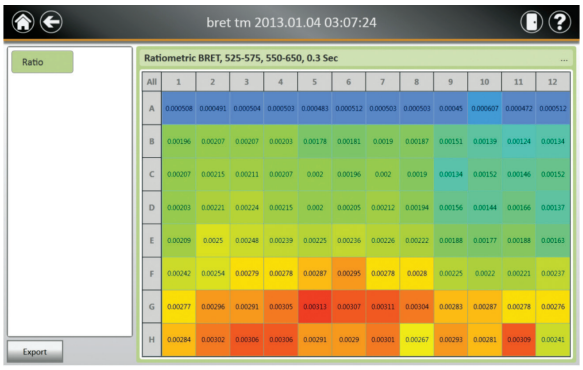
## Reporting

Provides the required technical elements of a 21CFR Part 11 compliant system for electronic signature control.

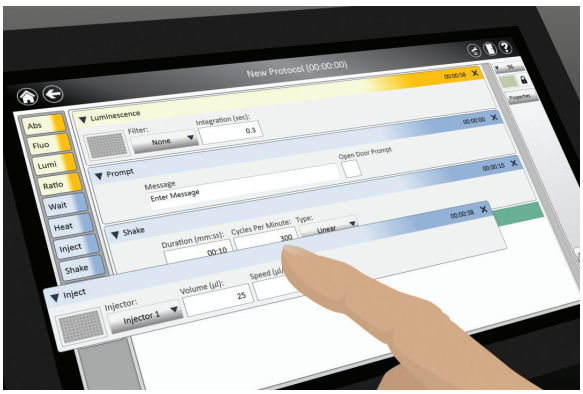
## Intuitive Software Interface

Create custom protocols, easily integrate into automated platforms, and export your data–all with the tap of a screen.

- Choose from preloaded protocols or customize your own
- Set up a plate map
- View data in a heat map display
- Easily export your results




*Heat Map Display*




*Drag and Drop Protocols*

# Assays that Integrate with Your Instrument

Choose from preloaded Promega protocols or customize your own using the intuitive drag-and-drop interface. GloMax® Discover was designed and developed for Promega assays:

- Making your research experiments easy
- Getting you up and running faster
- Supporting all of your needs in one place (assay, instrument, service)

## Cell Health Assays:

- CellTiter-Glo®
- CellTox™ Green
- Caspase-Glo®
- *and many more*

## Cell Signaling & Metabolism Assays:

- ADP-Glo™
- Kinase-Glo®
- P450-Glo®
- *and many more*

## BRET and FRET Assays:

- NanoBRET™
- Commercial and Homebrew assays

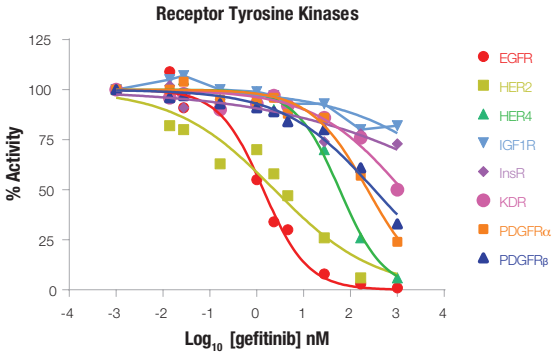
## Luciferase Reporter Assays:

- Nano-Glo®
- ONE-Glo®
- Dual-Glo® & DLR™
- *and many more*

# Reliable Data Collection

## Luminescence

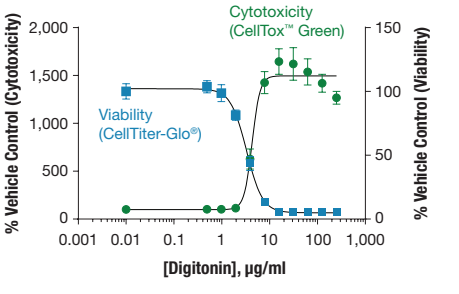
- Low-noise PMT ensures collected light is not compromised
- 10 to 1,000 times more sensitive than competitor instruments
- No need to dilute samples or manage Gain settings
- 2 to 3 logs more usable data than competing instruments
- Total or filtered luminescence readout for BRET or multi-wavelength distinction
- Lower cross talk for more usable data
- 4 filters included for BRET and filtered luminescence assays such as NanoBRET™, *Renilla*/YFP BRET, and Chroma-Glo™; Plus 1 customizable position
- Or, customize all 5 luminescence filters to your needs




*Tyrosine kinase inhibition was assessed following incubation with Gefitinib, a selective inhibitor of EGFR, using the ADP-Glo™ Kinase Assay.*

### Luminescence Module Specifications

| | |
|---|---|
| Detector | Top-reading, head-on photon counting photomultiplier tube (PMT) |
| Wavelength Range | 350–650nm |
| Detection Limit | $3 \times 10^{-21}$ moles of luciferase |
| Linear Dynamic Range | 9 logs |
| Cross talk | Less than $3 \times 10^{-5}$ (white, 96-well plate, Corning 3912) |
| Filtered Luminescence | Built-in filter paddle |




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

## Study cell viability, apoptosis and cytoxicity

## 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
- 5 excitation and emission filters included for common fluorescence assays;  Plus 1 customizable excitation and emission position
- Or, customize two fluorescence excitation positions or all six 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) |

## UV-Visible Absorbance

- Comes factory-installed with 9 UV-Visible filters for common colorimetric assays
- 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 | 9 absorbance filters included |
| Wavelengths included | 230, 260, 280, 320, 405, 450, 490, 560 and 600nm 10nm bandwidth |
| Detection Limit | 0.1 O.D. |
| Dynamic Range | 0–4.0 O.D. |


# Integrate Into Your Automated Workflow

*GloMax® Discover is Compatible with Third Party Automation Control*

# GloMax® Discover System Specifications

## Instrument Specifications

| | |
|---|---|
| Detection Modes | Luminescence, Fluorescence Intensity, UV-Visible Absorbance, Filtered Luminescence, BRET and FRET |
| Sample Format | 6, 12, 24, 48, 96 and 384-well plates |
| Tablet PC | Windows® 8 Tablet PC with USB connection to instrument |
| Read Speed | 96-well plate: less than 1 minute; 384-well plate: less than 3 minutes |
| Automation Compatibility | Hardware and software accessible to 3rd party hardware/software control, including LIMS. |
| Dimensions | 18.5in (46.9cm) width, 19.5in (46.5cm) depth, 10in (25.4cm) height without Tablet and PC mounted, 16in (35.5cm) height with Tablet and PC mounted |
| Weight | Approximately 60lbs. (27kg) |
| Power Requirements | 120VA, 50/60 HZ |
| Warranty | 1-year parts and labor warranty included |
| Regulatory Compliance | For Research Use Only. Not for use in Diagnostic Procedures |

## Injector System Specifications

| | |
|---|---|
| Number of injectors (optional) | Two injectors |
| Dispense Volume Range | 5–200µl in 1µl increments |
| Plate Compatibility | 6, 12, 24, 48, and 96-well plates |
| Injection Speed | 20–500µl per second |
| Waste Collection Tray Volume | Approximately 50ml |
| Void Volume | 500µl |

## Shaker System Specifications

| | |
|---|---|
| Shaking Pattern | Linear or orbital patterns |
| Shaking Intensity | 100–500 cycles/minute |

## Heating System Specifications

| | |
|---|---|
| Temperature Range | Ambient +5°C to 45°C |

## PC Requirements

| | |
|---|---|
| Operating System | Windows® 8, 64 bit, with USB connection to instrument |
| RAM | 2GB |
| Disk Space | 64GB |
| Other Requirements | Microsoft.NET 4.0 Framework (full version), Microsoft Excel 2013 Professional |

## Ordering Information

| | |
|---|---|
| GloMax® Discover System<br>*(comes with U.S. Instrument power cord and U.S. Tablet PC power cord)* | Cat.# GM3000 |
| GloMax® Discover Dual Injectors with Pump Station | Cat.# GM3030 |
| GloMax® Discover Luminescence Filter Paddle | Cat.# GM3011 |
| GloMax® Discover Fluorescence Filter Paddle | Cat.# GM3012 |
| GloMax® Discover Inner and Outer Injector Tubing, Natural | Cat.# GM3014 |
| GloMax® Discover Inner and Outer Injector Tubing, Black | Cat.# GM3015 |
| Installation Qualification (IQ) | Cat.# SA1104 |
| Operational Qualification (OQ) | Cat.# SA1105 |
| Installation and Operational Qualification (IQ/OQ) | Cat.# SA1106 |
| Standard Service Agreement | Cat.# SA4000 |
| Basic Service Agreement | Cat.# SA4010 |
| Preventive Maintenance | Cat.# SA4030 |

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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