

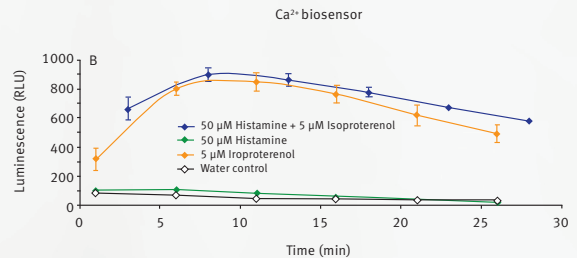
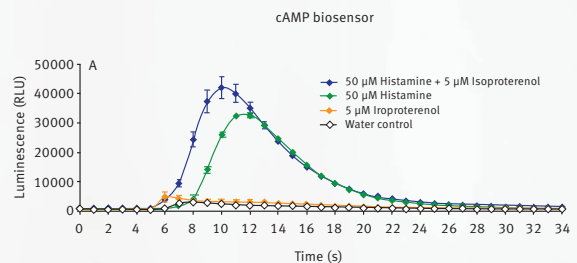


Dedicated luminescence microplate reader

The LUMIstar® Omega is BMG LABTECH's powerful dedicated luminescence microplate reader, providing highly sensitive flash and glow assay readings. This DLReady-certified microplate reader can also come equipped with Simultaneous Dual Emission for BRET applications, and can be further upgraded to a multi-mode reader.

Features

- High performance microplate reader for luminescence
- Top and bottom reading
- BRET, optional with Simultaneous Dual Emission detection
- Up to two reagent injectors
- Upgradeable to FLUOstar® Omega or POLARstar® Omega including multiple detection modes and UV/vis spectrometer
- Powerful MARS data analysis software



Multiplexing luminescent measurements of human mesenchymal stem cells (hMSC) transiently transfected with a live-cell cAMP biosensor (A) or Ca²⁺ biosensor Clonetics™ (B) from Lonza. The effect of drug additions on two signaling pathways in just one well is performed on the LUMIstar Omega microplate reader.

Due to the modularity of BMG LABTECH's instruments, all, or combinations of the features below can be installed at purchase or upgraded at any time. Please contact your local representative for more details or a quote.

Detection modes	Luminescence (flash and glow) - including BRET
Measurement modes	Top and bottom reading Endpoint and kinetic Sequential multi emission Simultaneous Dual Emission Ratiometric measurements
Microplate formats	6 to 384-well plates, user-definable
Microplate carrier	Robot compatible
Detector	Low noise photomultiplier tube
Wavelength selection	Optical filters
Optical filters	Emission filter wheel for 8 filters
Optical path guides	Top: liquid-filled light guides Bottom: fiber optics
Spectral range	240 - 740 nm
Sensitivity	< 20 amol/well ATP DLR certified
Read times	16 s (96), 47 s (384)
Reagent injection	Up to 2 built-in reagent injectors Injection at measurement position (6 to 384-well) Individual injection volumes for each well (3 to 500 µL) Variable injection speed up to 420 µL/s Up to four injection events per well Reagent back flushing
Shaking	Linear, orbital, and double-orbital with user-definable time and speed
Incubation	+4 °C above ambient up to 45 °C or 65 °C The upper heating plate of the incubation chamber operates at 0.5 °C more than the lower plate. This prevents condensation build-up on the lid or sealer.
Software	Multi-user Reader Control and MARS data analysis software included FDA 21 CFR Part 11 compliant
Dimensions	Width: 44 cm, depth: 48 cm, height: 30 cm; weight: 28 kg
	Optional accessories
Stacker	Magazines for up to 50 plates - continuous loading feature
Purge gas vent	System to inject an atmosphere or to pull a vacuum into the reader
Atmospheric Control Unit (ACU)	Actively regulates O ₂ and CO ₂ - 0.1-20 %
THERMOstar	Microplate incubator and shaker
Optical filters	Emission filters
Upgrades	Please contact your local representative for upgrades including options such as detection modes, reagent injectors, etc.



*Limit of detection (sensitivity) was calculated according to the IUPAC standard: $3 \times (SD_{blank}) / \text{slope}$
Microplates: white for LUM
Specifications are subject to change without notice.

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