LUMIstar® Omega



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
- Simultaneous Dual Emission detection for BRET assays
- · Up to two reagent injectors
- Upgradeable to FLUOstar[®] 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 CloneticsTM [B] from Lonza. The effect of drug additions on two signaling pathways in just one well is performed on the LUMIstar Omega microplate reader.



The LUMIstar Omega can include all or any combination of features/options/accessories listed below at purchase. Upgrading with additional features/options/accessories may be possible after purchase. Contact your local representative for more details or a quote.

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| 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 |
| | 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. |

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

DLR is a trademark of Promega Corp.

All mentioned products are for research use only.