Promega

TECHNICAL REFERENCE

Absorbance, Excitation and Emission Information for Bioluminescent Assays

Bioluminescent (Luciferase-Based) Assays.

Luciferases are enzymes that generate light through the release of chemical energy in their substrates as photons. This process is luminescence and differs from fluorescence in that a chemical reaction occurs and there is no light needed to excite the molecules involved (excitation).

All luciferases have emission spectra with broad peaks, and thus it is generally recommended that the luminescence be measured over as much of the visible spectrum as possible. Our Chroma-Luc™ technology is an exception to that general rule in that it uses two different luciferases with overlapping but distinct emission spectra. The light emission from each of these luciferases is measured over a different range of wavelengths.

Product	Peak Emission Wavelength	Recomended Filter
BacTiter-Glo™ Microbial Cell Viability Assay	560nm	No Filter
Beta-Glo® Assay System (β-galactosidase assay coupled to a firefly luciferase reaction)	560nm	No Filter
Calpain-Glo™ Protease Assay	560nm	No Filter
Caspase-Glo® Assays (Caspase assay coupled to a firefly luciferase reaction)	560nm	No Filter
CellTiter-Glo® Assay (ATP assay using firefly luciferase)	560nm	No Filter
(Chroma-Luc™) Click beetle luciferase (Red) CBR*luc* (Green) CBG99*luc* or CBG68*luc*	 613nm 537nm	 610 long pass 510/60 (510±30)
DPPIV-Glo™ Protease Assay	560nm	No Filter
Firefly luciferase (*luc, luc*+, h*luc*+ or *luc*2 genes from pGL3 and pGL4 Vector series or other vectors such as psiCHECK™-2)	560nm	No Filter
Kinase-Glo® Assay and Kinase-Glo® Plus Assay (Kinase assay coupled to a firely luciferase reaction)	560nm	No Filter
MAO-Glo™ Assay	560nm	No Filter
P450-Glo™ Assays (Cytochrome P450 assay coupled to a firefly luciferase reaction)	560nm	No Filter
Pgp-Glo™ Assay System	560nm	No Filter
Proteasome-Glo™ Cell-Based Assay	560nm	No Filter
Renilla luciferase (R*luc* or hR*luc* genes from pRL, and pGL4 Vector series or other vectors such as psiCHECK™-1 and -2)	480nm	No Filter

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