

Application Information

Gaussia Luciferase mRNA

In vitro Transcription and Capping of Gaussia Luciferase mRNA Followed by HeLa Cell Transfection

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This method describes high yield in vitro synthesis of both capped and uncapped mRNA from a linearized plasmid containing the Gaussia luciferase (GLuc) gene. The RNA is purified and a fraction of the uncapped RNA is enzymatically capped using the Vaccinia virus capping enzyme. In the final step, the mRNA is transfected into HeLa cells and cell culture supernatants are assayed for luciferase activity.

CLOCK Gene

Induction of the CLOCK Gene by E2-ER α Signaling Promotes the Proliferation of Breast Cancer Cells

Growing genetic and epidemiological evidence suggests a direct connection between the disruption of circadian rhythm and breast cancer. This study investigates the regulation of *CLOCK* of expression by ER α and its roles in cell proliferation. Immunohistochemical analysis of human breast tumor samples revealed high expression of *CLOCK* in ER α -positive breast tumor samples. HeLa or MCF-7 cells were transfected with the appropriate plasmids, luciferase activity of the sample was measured with a Centro LB960 Microplate Luminometer (Berthold Technologies GmbH Co KG, Germany)

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Centro Family

Which one is best for you??

Berthold Technologies is renowned for our luminometers with thousands of instruments installed all over the world.

Various models and configurations from the Centro luminometer family are available. All of them guarantee high sensitivity and reliability combined with flexibility and ease-of-use.

Centro - the versatile model for all applications
CentroXS3 - for extreme sensitivity
CentroPRO - attractive entry level for research

LB960 Centro



LB960 CentroXS3



LB962 CentroPRO

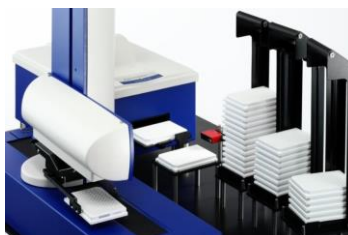


Instrument	Centro	CentroXS ³	CentroPRO
Plate formats	96 & 384 wells	96 & 384 wells	96 wells
Sensitivity	5 amol ATP/well 2 zmol firefly luciferase	1.5 amol ATP/well 1.5 zmol firefly luciferase	20 amol ATP/well 7.5 zmol firefly luciferase
Injectors	Up to 3 1 in reading position	Up to 3	external
Heating	Up to 42°C	ambient	ambient
Shaking	3 modes/ 3 speeds	3 modes/ 3 speeds	1 modes/ 3 speeds
Software & Operation	PC based MikroWin Ratio calculation (DLR), kinetics, curve fit, automation support	PC based MikroWin Ratio calculation (DLR), kinetics, curve fit, automation support	PC based ICE software incl. ratio calculation (Dual- Glo)
Preferred Applications	- Aequorin-based Calcium monitoring - Acridinium-ester-based Immunoassay - Cellular Luminescence	- Reporter gene assay (single and dual) - ATP Determination - CALUX Assays	- Reporter Gene Assay (Dual-Glo) - ATP Determination

Differences in Centro LB960 and CentroXS3 LB960

- * PMT located directly above well: better efficiency
- * Injectors all in pre-measurement positions
 - * Slightly higher housing (~10 mm)
 - * Ambient temperature only
- * Higher tolerance for varying plate heights: +/- 0.6 mm
- * Better and more stable alignment of PMT level and plate level
 - * 96 or 384 wells: change of cone

ADDITIONAL FEATURES



Robot Accessibility and Small Footprint

**For additional information on any Berthold product
OR TO SCHEDULE A DEMO
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