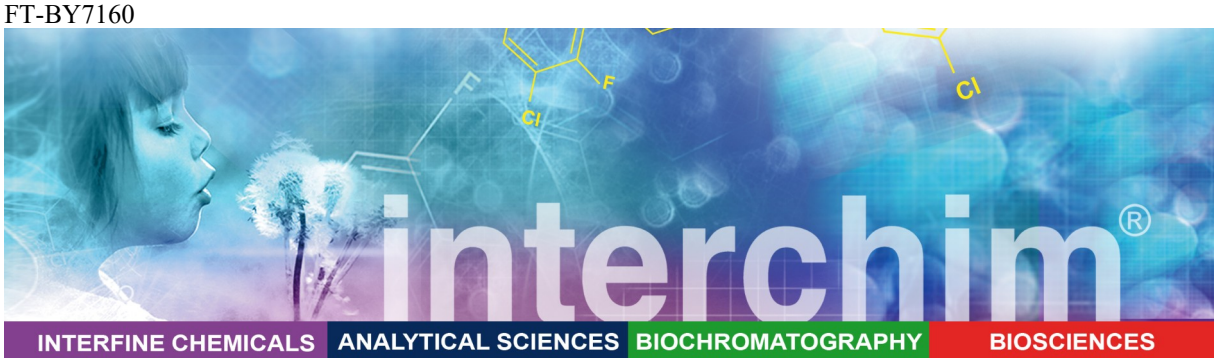
FT-BY7160



Gaussia Luciferase Assay Kits

. *Gaussia* luciferase expressed in mammalian cells is much brighter than native *Renilla reniformis luciferase* and does not require ATP to catalyze the oxydation of coelenterazine.

Product Description

Product name cat.number	Description
***Gaussia* Luciferase FLASH Assay Kit** FP-BY7161, 50 ml (1000 rxns) Lysis buffer Gaussia Dilution Buffer Coelenterazine Dilution Buffer 50x Coelenterazine substrate	Best with a luminometer equipped with an injection port - creates optimal conditions for GLuc and mutated GLuc versions - low background, thus higher S/N ratio - higher overall signal - buffer has protein stabilizing properties
***Gaussia* Luciferase GLOW Assay Kit for HTS** FP-CM3751, 50 ml (1000 rxns) GLOW Reagent for *Gaussia* Luciferase 50X Coelenterazine Substrate	For assays requiring a longer lasting luminescence (e.g. high-throughput screenings) or if sensitivity is not an issue - one-step assay reagent (lysis-, dilution- and assay-buffer in one solution) - stable luminescent signal (2-3 hours half-life) - detection of secreted Gaussia Luciferase - detection of intracellular expressed Gaussia Luciferase - low background, thus high Signal to Noise ratio

Storage: –80°C (one year) (M, J, I, Q) Protect from light and moisture

Upon receipt, please store the kit at -80°C or individual components at indicated temperatures.

Upon thawing (do not heat) please aliquot and/or store buffers at +4°C for up to 6 months or at room temperature for up to 2 months. Coelenterazine dilution buffer **must** be at room temperature (20-25°C) before adding 50x Coelenterazine substrate.

The Coelenterazine substrate should be optimally stored at -80°C. It will not freeze and can conveniently be used directly out of the freezer. Please protect from light if handled outside the freezer.

Description

Gaussia Luciferase is a novel a reporter system for mammalian cells with considerable advantages over other luciferase reporters.

Cell lysis not necessary

Gaussia luciferase possesses a natural secretory signal and upon expression is secreted into the culture medium. Therefore, preparation of cell lysates is not necessary as the assay can simply and quickly be performed using

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the culture medium. This not only saves time but also allows time course experiments to be performed using the same intact cells.

Higher assay sensitivity
Gaussia luciferase generates up to 1000-fold higher bioluminescent signal intensity, compared to firefly and *Renilla* luciferases, making it an ideal transcriptional reporter. This makes it particularly useful for analyzing gene expression in hard-to-transfect cells or for studying regulation of weak promoters.

Very stable enzyme
With *Gaussia* luciferase you can collect samples from experiments done on different days and run the luciferase assays in one go. The secreted *Gaussia* luciferase enzyme is very stable and can be stored for several days at 4°C without loss of activity. Cell supernatants can further be stored at -20°C for several weeks, still with little loss of activity.

Extended duration of light emission
The *Gaussia* Luciferase Assay Buffer has been designed to stabilize the light reaction, which facilitates the assay and gives more consistent results. This is also an advantage for high throughput screening applications where large numbers of samples have to be assayed.

Directions for use

FLASH Assay Quick protocol

1. Lysis (optional)
a. pellet cells by centrifugation (e.g. 400 x g for 5 min.)
b. remove supernatant and lyse cell by adding the one pellet volume of Lysis buffer
c. mix by pipetting, incubate for 15 min

2. Assay preparation
a. dilute 1 part lysate with 1 part Gaussia Dilution Buffer (high amounts of detergents from the Lysisbuffer will reduce the activity of Gaussia Luciferase)
b. use 20-50 µl of the diluted lysate in a black 96-well microtiter plate
c. prepare Substrate-Buffer by adding 20 µl of 50x Coelenterazine-substrate to each ml of Coelenterazine-dilution buffer (discard after use, do not store)

3. Measurement
a. inject 50 µl of substrate buffer into each well with a 2 second delay before integrating the signal for 10 seconds

GLOW Assay Quick protocol

1. Allow the buffer and cell culture supernatant to equilibrate to room temperature.
2. Prepare GLOW working solution by adding 20 ul of 50x substrate to each 1 ml of buffer
3. Add one volume of this solution (e.g. 50 µl) to one volume of cells/ cell supernatant (e.g 50 µl) into a black 96-well or 384-well plate
4. Wait 5 min before measuring the luminescence (the luminescence will decay in nearly a linear fashion with a half-life of approx. 3 hours)

Technical and scientific information

References

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- **Wiles S**. *et al*., Alternative Luciferase for Monitoring Bacterial Cells under Adverse Conditions, Applied and Environmental Microbiology, p. 3427-3432, Vol. 71, No. 7 (2005) Article

Related / associated products and documents

- Gaussia Luciferase Protein, 95% pure, FP-CM3750
- Anti-Gaussia Luciferase, polyclonal rabbit, FP-CJ3430
- Anti-Gaussia Luciferase, monoclonal mouse, FP-CM3770
- Coelenterazine H, R30783
- Coelenterazine, native, 972331

Ordering information

Catalog size quantities and prices may be found at http://www.interchim.com
Please inquire for higher quantities (availability, shipment conditions).

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