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# NEW! UltraBrite ™ Gaussia luciferase assay reagent (*Ultrabrite* ™ GAR) an improved ultrasensitive assay reagent with a stable luminescent (Catalog # GAR-ULTRA)

***Our brightest and most stable version specially developed for high throughput applications***

| Catalog no. | Size | Description | Price |
|---|---|---|---|
| GAR-ULTRA 1 | 1000 assays | ***Ultrabrite*** ™ Gaussia Luciferase Assay Reagent | $500 |

**About Gaussia Luciferase:**

Gaussia Luciferase (GLuc) catalyzes the oxidation of the substrate coelenterazine in a reaction that produces light by a reaction which does not require ATP, and has considerable advantages over other luminescent reporter genes such as secretability and a much brighter signal intensity in addition to excellent stability of the bioluminescent signal when assaying with our Gaussia luciferase assay reagents.

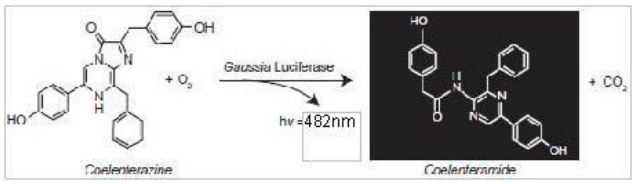


**Figure 1:** Photo-oxidation of coelenterazine catalyzed by Gaussia luciferase

## *Advantages:*

- *Enhances Gaussia luciferase (GLuc) signal by approx. 20X). Gaussia luciferase is 1000X brighter than firefly and renilla luciferase. The UltraBrite GAR reagent further increases GLuc signal intensity by 20-fold*
- *Higher SNR (signal to noise ratio).*): The *Ultrabrite* ™ GAR reagent has a significantly lower background. In High-Throughput Screening (HTS), a high SNR is crucial for accurate and reliable data for identification of true drug leads
- *Excellent Signal Stability*
- *Cost-effective: Better performance compared to other commercial reagents (see Fig below) and the GAR-2B reagent offered by Targeting Systems*
- *Rapid Assay- Short integration times (1-2 sec per samples) enable faster measurements and save time*
- *GLuc is a stable reporter. Samples of supernatant media or cell lysates can at stored at -20º C for months without loss of luciferase activity and assayed later.,*

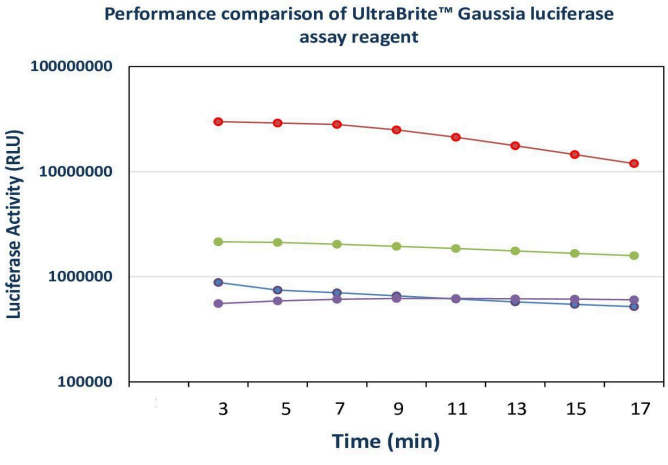


Figure 2: Performance comparison of the ***UltraBrite ™ GAR reagent with GLuc assay reagents form other vendors***

***Ultrabrite*** ™ Gaussia Luciferase Assay Reagent is an improved assay reagent which would be particularly useful in screening applications due to high sensitivity. The bioluminescent signal using the Ultrabrite GAR reagent is significantly brighter than that observed with our standard GAR-2B reagent or other commercial Gaussia luciferase assay reagents (see Figure 2) when assaying the commonly used Gluc double mutant (M2). The *Ultrabrite* ™ Gaussia Luciferase Assay Reagent is amenable to HTS applications as high assay sensitivity makes it particularly useful when working with applications involving gene expression from weak promoters). Even when using the Native Gluc reporter the sensitivity is 10X higher than that obtained with GAR-2 or other commercial reagents

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**Gaussia Luciferase Assay Protocol**

**Assay Protocol:** Make sure all buffers are at room temperature prior to assay

1. Dilute the concentrated coelenterazine (GAR substrate), provided as a 100X formulation to 1X using the GAR assay dilution buffer. For example, to prepare 5 ml of assay reagent dilute 50 ul of 100 X coelenterazine with 4.95 ml of GAR assay dilution buffer.
2. Pipette 20µl of Gaussia Luciferase Sample into assay dish or luminometer tube
3. Add 50 µl of Gaussia luciferase assay reagent (prepared as described in step 1). Mix well
4. Assay in luminometer, integrate for 10 seconds (or as desired)

Note: An optional stabilizer buffer is included for stabilization of Native Gluc activity but this will typically lower the activity to a level marginally higher that that obtained with Native Gluc while maintaining signal stability

Custom Reagents: We can provide custom formulations to fit your HTS application. Call our tech support team at 1-866-620-4018 or email us info@targetingsystems.net
Please check out our website www.targetingsystems.net for novel luciferase – based multiplexed assays which enable analysis of up to four promoter activities in the same group of transfected cells.

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