

QUANTI-Luc™ Gold (500 ml)

A coelenterazine-based luminescence detection kit for standard and HTS assays

Catalog code: rep-qlcg500

<https://www.invivogen.com/ quanti-luc-gold>

For research use only

Version 19F11-MM

PRODUCT INFORMATION

Contents

QUANTI-Luc™ Gold (500 ml) is a two-component reporter kit which contains:

- 1 pouch of QUANTI-Luc™ Plus, to prepare 500 ml for the standard procedure or 160 ml for the high throughput screening (HTS) procedure
- 1 bottle of QLC Stabilizer, providing for either the standard procedure (optional) 2 ml or the HTS procedure (required) 6 ml

This kit provides sufficient reagent for 100 x 96-well plates (standard procedure) or 40 x 1536-well plates (HTS procedure).

Required Material (not provided)

- Sterile water
- Clean bottle or flask

Storage and Stability

- Store QUANTI-Luc™ Plus pouch at -20°C for 12 months.
- Store QLC Stabilizer at room temperature (15-25°C) for 12 months.
- Reconstituted QUANTI-Luc™ Gold is stable for 1 week at 4°C and for 1 month at -20°C. Prepare aliquots to avoid repeated freeze-thaw cycles.

Note: This product is photosensitive and should be protected from light.

Quality Control

Each lot is thoroughly tested to ensure the absence of lot-to-lot variation.

- Physicochemical characterization (including pH, solubility).
- Functional assays using recombinant Lucia protein or reporter cells.

DESCRIPTION

QUANTI-Luc™ Gold is an optimized kit for the detection of Lucia luciferase and other coelenterazine-utilizing luciferases (e.g. Gaussia and Renilla luciferases). This two-component kit comprises QUANTI-Luc™ Plus (coelenterazine-containing reagent) and QLC Stabilizer. The light signal produced is quantified using a luminometer and expressed as relative light units (RLUs).

This kit provides the user with two options for luciferase activity measurement (see Figure 1):

(a) QUANTI-Luc™ Plus without QLC Stabilizer allows enhanced light output detection (as compared to our standard QUANTI-Luc™).

(b) QUANTI-Luc™ Plus with QLC stabilizer (QUANTI-Luc™ Gold) allows enhanced light signal stability (over 10 minutes). This option is ideal for high-throughput screening, time-course studies, or when using a luminometer without injectors.

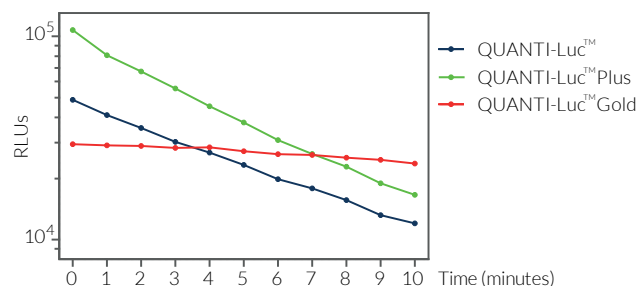


Figure 1: Lucia luciferase activity detection with QUANTI-Luc™-based detection media. THP1-Dual™ cells were stimulated for 24h with 10 µg/ml 2'3'-cGAMP. The ISG response was assessed by determining Lucia luciferase activity in the supernatant using QUANTI-Luc™, QUANTI-Luc™ Plus, and QUANTI-Luc™ Gold (QUANTI-Luc™ Plus with QLC Stabilizer). Relative light units (RLUs) were measured over 10 minutes.

METHODS

QUANTI-Luc™ Gold has been optimized for use in 96-well plates (standard procedure) and in 1536-well plates (HTS procedure) as described below and on the next page.

A. Standard Procedure

Two options are available (see Figure 2):

- Option 1: for enhanced light signal stability, use QUANTI-Luc™ Gold (QUANTI-Luc™ Plus with QLC Stabilizer).
- Option 2: for enhanced light output detection, use QUANTI-Luc™ Plus alone.

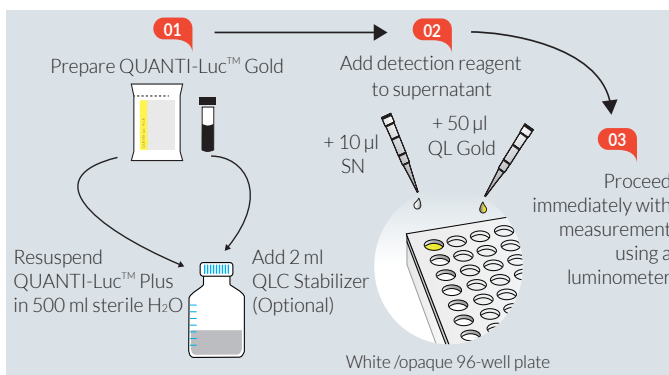


Figure 2: Standard procedure using QUANTI-Luc™ Gold (500 ml).

TECHNICAL SUPPORT

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Standard Procedure Option 1

1. Transfer the QUANTI-Luc™ Plus pouch contents into a 1L clean bottle or flask.
2. Add 500 ml of sterile water. Swirl **gently** until powder is completely dissolved.
3. Add 2 ml of QLC Stabilizer.

Note: For optimal results it is important to add the correct volume, as too much QLC Stabilizer can result in decreased signal intensity.

4. Vortex **very briefly** (for a few seconds). Incubate at room temperature for at least 15 minutes.
5. Use QUANTI-Luc™ Gold immediately or store at 4°C or -20°C until needed.

Note: This product is photosensitive and should be protected from light.

6. Proceed to measurement using one of the following protocols:

To obtain **end-point readings** using a luminometer **with an injector**.

1. Set the luminometer with the following parameters: 50 µl of injection, an end-point measurement with a 4 second start time and a 0.1 second reading time.
2. Add 10-20 µl of sample per well into a 96-well white (opaque) or black plate, or a luminometer tube.
3. Prime the injector with the QUANTI-Luc™ Gold assay solution and proceed **immediately** with the measurement.

To obtain **end-point readings** using a luminometer **without injectors**:

1. Set the luminometer with the following parameters: an end-point measurement with a 4 second start time and a 0.1 second reading time.
2. Add 10-20 µl of sample per well into a 96-well white (opaque) or black plate, or a luminometer tube.
3. Add 50 µl of QUANTI-Luc™ Gold assay solution to each well or tube.
4. Gently tap the plate several times to mix (do **not** vortex).
5. Proceed **immediately** with the measurement.

Standard Procedure Option 2

1. Transfer the QUANTI-Luc™ Plus pouch contents into a 1L clean bottle or flask.
2. Add 500 ml of sterile water. Swirl gently until powder is completely dissolved.
3. Use QUANTI-Luc™ Plus immediately or store at 4°C or -20°C until needed.

Note: This product is photosensitive and should be protected from light.

4. Proceed to measurement using one of the following protocols:

To obtain **end-point readings** using a luminometer **with an injector**.

1. Set the luminometer with the following parameters: 50 µl of injection, an end-point measurement with a 4 second start time and a 0.1 second reading time.
2. Add 10-20 µl of sample per well into a 96-well white (opaque) or black plate, or a luminometer tube.
3. Prime the injector with the QUANTI-Luc™ Plus assay solution and proceed **immediately** with the measurement.

To obtain **end-point readings** using a luminometer **without injectors**.

1. Set the luminometer with the following parameters: an end-point measurement with a 4 second start time and a 0.1 second reading time.
2. Add 10-20 µl of sample per well into a 96-well white (opaque) or black plate, or a luminometer tube.
3. Add 50 µl of QUANTI-Luc™ Plus assay solution to each well or tube.
4. Gently tap the plate several times to mix (do **not** vortex).
5. Proceed **immediately** with the measurement.

B. High Throughput Screening (HTS) Procedure

Reading of high throughput screening plate requires enhanced light signal stability. Therefore, we recommend to use QUANTI-Luc™ Gold (QUANTI-Luc™ Plus with QLC Stabilizer) for this assay.

This procedure has been optimized for use in HTS screening procedures in 1536-well plates. QUANTI-Luc™ Gold is added directly to the cell suspension to reduce liquid handling (see Figure 3).

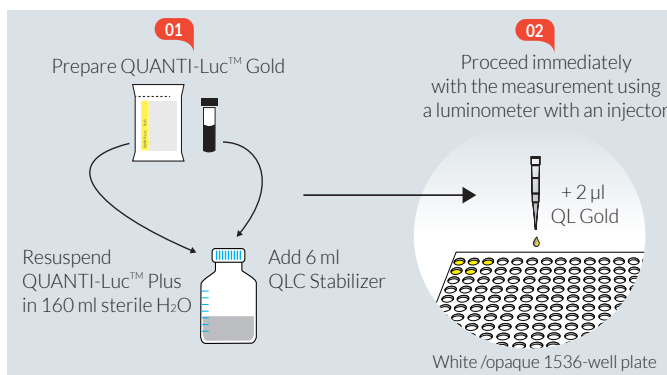


Figure 3: High throughput screening procedure using QUANTI-Luc™ Gold (500 ml).

1. Dispense cell suspension and test compounds into a 1536-well white or black plate in a volume that does not exceed 5 µl per well. Incubate cells with test compounds for the desired period of time.
2. Transfer QUANTI-Luc™ Plus pouch contents into a 250 ml clean bottle or flask.
3. Add 160 ml of sterile water. Swirl **gently** until powder is completely dissolved. This step may take several minutes.
4. Add 6 ml of QLC Stabilizer.

Note: For optimal results, it is important to add the correct volume as too much QLC Stabilizer can result in decreased signal intensity.

5. Vortex **very briefly** (for a few seconds). Incubate at room temperature for at least 15 minutes.

Note: This product is photosensitive and should be protected from light.

7. Dispense 2 µl of QUANTI-Luc™ Gold per wells containing ≤5 µl of cell culture in a 1536-well plate.
8. Record luminescence once the signal is stabilized according to your instrument setting.

RELATED PRODUCTS

Product	Catalog Code
QUANTI-Luc™ Gold (25 ml)	rep-qlcg1
QUANTI-Luc™ (secreted luciferase detection medium)	rep-qlc1
Recombinant Lucia luciferase Protein	rec-lucia
Reporter Cells	
THP1-Dual™ (IRF-Lucia/NF-κB-SEAP) Cells	thpd-nfis
THP1-Lucia™ ISG Cells	thp1-isg
THP1-Lucia™ NF-κB Cells	thp1-nfkb

For a complete list of InvivoGen's Lucia luciferase Reporter Cell Lines visit <https://www.invivogen.com/lucia-reporter-cells>

TECHNICAL SUPPORT

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