LUCIFERIN

Preparation of Luciferin for *In Vitro* and *In Vivo* Bioluminescent Assays

Preparation of Luciferin for *In Vitro* Bioluminescent Assays

Materials

- D-Luciferin Firefly, potassium salt, 1.0 g /vial (Caliper Life Sciences Part Number #119222)
- Sterile water
- Complete media

Procedure

1. Prepare a 200X Luciferin stock solution (30 mg/ml) in sterile water. Mix gently by inversion until Luciferin is completely dissolved. Use immediately, or aliquot and freeze at -20 °C for future use.

   Note: One can either reconstitute the entire 1.0 g of D-Luciferin in 33.3 mL of sterile water to make the 30 mg/mL (200x) stock solution, or reconstitute the quantity of D-Luciferin necessary for an individual experiment.

2. Prepare a 150 µg/mL working solution of D-Luciferin in pre-warmed tissue culture medium.

   Quick thaw 200X stock solution of Luciferin and dilute 1:200 in complete media (150 µg/mL final).

3. Aspirate media from cultured cells.

4. Add 1x Luciferin solution to cells just prior to imaging.

   Note: Incubating the cells for a short time at 37 °C before imaging can increase the signal.

Preparation of Luciferin for *In Vivo* Bioluminescent Assays

Materials

- D-Luciferin, Firefly, potassium salt, 1.0 g/vial (Caliper Life Sciences Part Number #119222)
- DPBS, w/o Mg^{2}+ and Ca^{2}+
- Syringe filter, 0.2 um

Procedure

1. Prepare a fresh stock solution of Luciferin at 15mg/mL in DPBS. Filter sterilize through a 0.2 um filter.

2. Inject 10 µL/g of body weight. Each mouse should receive 150 mg Luciferin/kg body weight. (e.g. For a 10 g mouse, inject 100 µL to deliver 1.5 mg of Luciferin.)

3. Inject the Luciferin intra-peritoneally (i.p.) 10-15 minutes before imaging*.

* A Luciferin kinetic study should be performed for each animal model to determine peak signal time.

Contact Information:

If you have any questions regarding these Caliper's Luciferin, please contact us at 508.497.6592 or e-mail: reagents@caliperLS.com

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