

## Product Data Sheet

Product Name: Luciferase  
Cat. No.: GC36492

### Chemical Properties

Cas. No. 9014-00-0

Formula M.Wt

Solubility Water: 50 mg/mL Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

### Protocol

Luciferase-Luc@CaP [1]

1. 400µg/mL Luciferase-Luc@CaP NPs 4 300µM Cys(SET)-Lys-CBT CKCBT 300µM Am-luciferin 1mM ATP 10mM Mg<sup>2+</sup>

2.

1 96 2 × 10<sup>6</sup>

2 400µg/mL Luc@CaP NPs 8

3 300µM CKCBT Am-luciferin

4 0 1 2 4 6 7 BLI

3.

1 BALB/c 5 × 10<sup>6</sup>

**Caution: Product has not been fully validated for medical applications. For research use only.**  
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com  
Address: 10292 Central Ave. #205, Montclair, CA, USA

**Product Data Sheet**

2 7-8mm i.t. 4.0mg/kg Luc@CaP NPs

3 20 i.p. 200µmol/kg CKCBT 50µmol/kg Am-luciferin

4 120

1

2

References:

[1] Hong Y, Yang Y, Wang C, et al. Luciferase-Loaded Calcium Phosphate Nanoparticles for Persistent Bioluminescence Imaging of Orthotopic Breast Tumors. *Anal Chem.* 2024 Sep 10;96(36):14320-14325.

**Background**

Luciferase is an enzyme capable of catalyzing bioluminescent reactions. Luciferase catalyzes the oxidative decarboxylation of the substrate luciferin to convert chemical energy into light energy, and it can be used to reflect the expression level of a target gene by being coupled with that gene. Luciferase can be used in research related to gene expression regulation and in vivo imaging<sup>[1-4]</sup>.

References:

[1] Schramm S, Al-Handawi MB, Karothu DP, et al. Mechanically Assisted Bioluminescence with Natural Luciferase. *Angew Chem Int Ed Engl.* 2020 Sep 14;59(38):16485-16489.

[2] Tu SC. Activity coupling and complex formation between bacterial luciferase and flavin reductases. *Photochem Photobiol Sci.* 2008 Feb;7(2):183-8.

[3] Dupont S. Luciferase Reporter Assays to Determine YAP/TAZ Activity in Mammalian Cells. *Methods Mol Biol.* 2019;1893:121-135.

[4] Yang T, Yuan Y, Ma F. Luciferase Reporter Systems in Investigating Interferon Antiviral Innate Immunity. *Methods Mol Biol.* 2025;2854:127-141.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA