

Luciferase (Luci17): sc-57604

BACKGROUND

Luciferase isolated from the common North American firefly, *Photinus pyralis*, is one of the most extensively studied enzymes that catalyze light production in bioluminescent organisms. Luciferase belongs to the ATP-dependent AMP-binding enzyme family. It produces green light with a wavelength of 562 nm. Following is the chemical catalytic reaction, which is catalyzed by Luciferase: *Photinus* luciferin + O₂ + ATP = oxidized *Photinus* luciferin + CO₂ + AMP + diphosphate + light.

SOURCE

Luciferase (Luci17) is a mouse monoclonal antibody raised against Luciferase of *Photinus pyralis* origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Luciferase (Luci17) is available conjugated to agarose (sc-57604 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-57604 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-57604 PE), fluorescein (sc-57604 FITC), Alexa Fluor® 488 (sc-57604 AF488), Alexa Fluor® 546 (sc-57604 AF546), Alexa Fluor® 594 (sc-57604 AF594) or Alexa Fluor® 647 (sc-57604 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-57604 AF680) or Alexa Fluor® 790 (sc-57604 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Luciferase (Luci17) is recommended for detection of endogenous Luciferase of *Photinus pyralis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); also recommended for detection of overexpressed Luciferase in additional mammalian and non-mammalian species.

Molecular Weight of Luciferase: 62 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

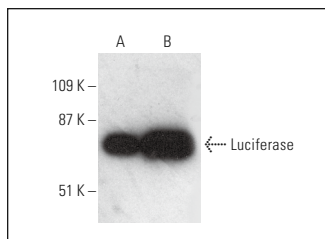
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

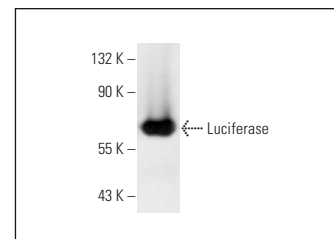
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



Luciferase (Luci17) HRP: sc-57604 HRP. Direct western blot analysis of Luciferase recombinant protein at 100 ng (A) and 200 ng (B) total protein.



Luciferase (Luci17): sc-57604. Western blot analysis of *Photinus pyralis* recombinant Luciferase.

SELECT PRODUCT CITATIONS

- Ho, T.Y., et al. 2007. Noninvasive nuclear factor-κB bioluminescence imaging for the assessment of host-biomaterial interaction in transgenic mice. *Biomaterials* 28: 4370-4377.
- Coughlan, L., et al. 2012. Ad5:Ad48 hexon hypervariable region substitutions lead to toxicity and increased inflammatory responses following intravenous delivery. *Mol. Ther.* 20: 2268-2281.
- Parker, A.L., et al. 2013. Pseudotyping the adenovirus serotype 5 capsid with both the fibre and penton of serotype 35 enhances vascular smooth muscle cell transduction. *Gene Ther.* 20: 1158-1164.
- Ahmadi, S. and Wade-Martins, R. 2014. Familial Alzheimer's disease coding mutations reduce Presenilin-1 expression in a novel genomic locus reporter model. *Neurobiol. Aging* 35: 443.e5-443.e16.
- Zhang, J., et al. 2015. Notch intracellular domain (NICD) suppresses long-term memory formation in adult *Drosophila* flies. *Cell. Mol. Neurobiol.* 35: 763-768.
- Sheahan, A.V., et al. 2016. A molecular imaging biosensor detects *in vivo* protein folding and misfolding. *J. Mol. Med.* 94: 799-808.
- Kaul, A., et al. 2021. Molecular insights into the antistress potentials of brazilian green propolis extract and its constituent artemillin C. *Molecules* 27: 80.
- Jia, P., et al. 2022. IMB-BZ as an inhibitor targeting ESX-1 secretion system to control mycobacterial infection. *J. Infect. Dis.* 225: 608-616.
- Molière, S., et al. 2024. Fast ultrasound scanning is a rapid, sensitive, precise and cost-effective method to monitor tumor grafts in mice. *J. Mammary Gland Biol. Neoplasia* 29: 2.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.