

Product datasheet

Anti-Firefly Luciferase antibody [Luci17] ab16466

★★★★☆ 3 Abreviews 14 References 1 Image

Overview

Product name	Anti-Firefly Luciferase antibody [Luci17]
Description	Mouse monoclonal [Luci17] to Firefly Luciferase
Host species	Mouse
Tested applications	Suitable for: WB
Immunogen	Fusion protein corresponding to Firefly Firefly Luciferase. Database link: P08659
Positive control	WB: Purified luciferase protein
General notes	<p>Analysis of gene expression is most commonly assayed by transient transfection. Systems are generally based on the use of fusion genes which are inserted into cells, and the gene expression is assayed within 48 hours after introduction of DNA. Usually the fusion consists of the promoter binding site or enhancer sequence under study which is attached to a reporter gene. The amount of the reporter protein synthesized under the experimental conditions, is presumed to reflect the ability of the sequences studied to direct or promote transcription. Several enzymes are commonly used as reporter proteins, among them are chloramphenicol acetyl transferase (CAT), -galactosidase, human growth hormone (hGH) and luciferase. Luciferase has become one of the widely used reporter enzymes. The enzyme catalyzes a bioluminescent reaction which requires the substrate luciferin as well as Mg²⁺ and ATP. Mixing these reagents with the cell extract containing luciferase, results in a flash of light that decays rapidly. This light can be detected by a luminometer. The total light emission is proportional to the luciferase activity of the sample. The use of an antibody to detect luciferase can provide an alternative detection assay which directly detects luciferase protein levels, and thus has the advantage that it does not require luciferase activity and is not dependent on rapid kinetics. Moreover, antibodies can detect the luciferase enzyme expression in situ, providing a means to study the localized signal sequences using luciferase as a reporter gene. Reacts with Luciferase (Firefly) Protein.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is</p>

Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.08% Sodium azide Constituent: PBS
Purity	Protein A/G purified
Clonality	Monoclonal
Clone number	Luci17
Isotype	IgG1
Light chain type	unknown

Applications

Our [Abpromise guarantee](#) covers the use of **ab16466** in the following tested applications.

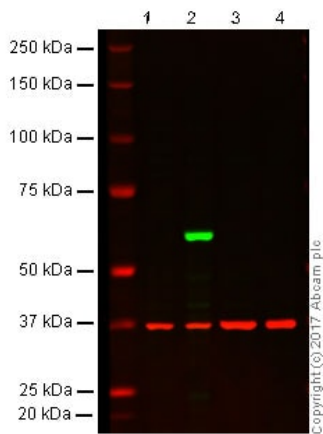
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★	Use at an assay dependent concentration.

Target

Relevance	Luciferase from the firefly has become one of the more widely used reporter proteins for the study of gene expression. Luciferase catalyzes a bioluminescent reaction which requires the substrate luciferin as well as Mg ²⁺ and ATP. Mixing these reagents with the cell extract containing luciferase, results in a flash of light that decays rapidly. This light can be detected by a luminometer. The total light emission is proportional to the luciferase activity of the sample.
Cellular localization	Peroxisome

Images



Western blot - Anti-Firefly Luciferase antibody [Luci17] (ab16466)

All lanes : Anti-Firefly Luciferase antibody [Luci17] (ab16466) at 1 µg/ml

Lane 1 : Non-transfected 293 whole cell lysate

Lane 2 : Firefly Luciferase transfected 293 whole cell lysate

Lane 3 : HeLa whole cell lysate

Lane 4 : NIH3T3 whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (ab216772) at 1/10000 dilution

Performed under reducing conditions.

Observed band size: 65 kDa

[why is the actual band size different from the predicted?](#)

Lanes 1 - 4: Merged signal (red and green). Green – ab16466 observed at 65 kDa. Red - loading control, [ab181602](#), observed at 37 kDa.

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using Licor blocking buffer before being incubated with ab16466 and [ab181602](#) (loading control) overnight at 4°C. Antibody binding was detected using Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed ([ab216772](#)) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed ([ab216777](#)) at a 1:10000 dilution for 1hr at room temperature and then imaged.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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