Product datasheet

Anti-Firefly Luciferase antibody ab21176

Overview

Product name
Anti-Firefly Luciferase antibody

Description
Rabbit polyclonal to Firefly Luciferase

Host species
Rabbit

Tested applications
Suitable for: ICC/IF, IHC-Fr, WB

Species reactivity
Reacts with: Firefly

Immunogen
Full length native protein (purified) (Firefly (Photinus pyralis)).

Positive control

Properties

Form
Liquid

Storage instructions
Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

Storage buffer
pH: 7.40
Preservative: 0.097% Sodium azide
Constituent: PBS

Purity
IgG fraction

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab21176 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td>★★★★★</td>
<td>Use a concentration of 10 µg/ml.</td>
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</table>
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

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<tr>
<td>IHC-Fr</td>
<td>★★★★★</td>
<td>1/1000. PubMed: 18219389</td>
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**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**

- **Untransfected HEK293**
- **Transfected HEK293**

**Immunocytochemistry/ Immunofluorescence - Anti-Firefly Luciferase antibody (ab21176)**

- ab21176 at 10 µg/mL staining Luciferase in transfected HEK-293 (Human epithelial cell line from embryonic kidney) cells by ICC/IF.
- The cells were fixed with methanol and acetone. An FITC conjugated anti-Rabbit IgG was used as the secondary antibody.
- **Left panel:** Un-transfected cells.
- **Right panel:** Transfected cells.

- **Immunocytochemistry/ Immunofluorescence - Anti-Firefly Luciferase antibody (ab21176)**

- ab21176 at 1/200 dilution staining engineered adult rat stromal stem cells by ICC/IF.
- The cells were fixed in 2% paraformaldehyde and 0.1% Triton X-100 was used for cell permeabilization (15 minutes incubation time). The cells were incubated with the antibody overnight at 4°C.
- The image shows Luciferase (green-[upper right panel]), counterstained cell nuclei (DAPI-blue-[upper left panel]), overlay (lower left panel) and a phase contrast image (lower right panel).
- The image was taken with a confocal laser scanning microscope equipped with an additional laser differential Interference Contrast (DIC) mode.

**Notes**

- IHC-Fr
- PubMed: 18219389
- WB
Immunohistochemistry (Frozen sections) - Anti-Firefly Luciferase antibody (ab21176)

This image is courtesy of an Abreview submitted by Radhi Praba Velayutham

ab21176 staining Firefly Luciferase in mouse cerebellum tissue sections by Immunohistochemistry (IHC-Fr - frozen sections).

Tissue was fixed with acetone, permeabilized with PBS + 0.1% Triton X-100 (PBST) for 10 minutes and blocked with 10% serum for 1 hour at 22°C. Samples were incubated with primary antibody (1/1500 in 10% goat serum in PBST) for 1 hour at 22°C. An Alexa Fluor® 555-conjugated Goat anti-rabbit IgG polyclonal (1/1000) was used as the secondary antibody.

All lanes: Anti-Firefly Luciferase antibody (ab21176) at 1/1000 dilution

Lane 1: Lysates from HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) cells overexpressing luciferase

Lane 2: Lysates from HEK-293T cells overexpressing luciferase with Luciferase Immunizing Peptide

Secondary

All lanes: Goat Anti-Rabbit IgG-Alkaline Phosphatase and a colorimetric substrate

Immunocytochemical analysis analysis of HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) cells overexpressing luciferase labeling Luciferase with ab21176 at a concentration of 10 μg/mL. The secondary antibody was a Goat anti-Rabbit IgG, FITC conjugate.
ab21176 staining mouse mammary carcinoma cells by ICC/IF.

Cells were PFA fixed and permeabilized in 0.1% Triton X-100 prior to blocking with a commercial blocking agent. The primary antibody was diluted 1/100 and incubated with the sample for 1 hour at 25°C. An Alexa-Fluor® 555 conjugated goat anti-rabbit antibody was used as the secondary.

The image shows firefly luciferase (red) in mouse tumour cells and cell nuclei counterstained with Hoechst (blue).

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