abcam

ab185923

# Anti-Firefly Luciferase antibody [EPR17789] - N-terminal

Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923) is a rabbit monoclonal antibody detecting Firefly Luciferase in **Western Blot, Flow Cytometry, ICC/IF**. Suitable for **Firefly**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | 20ul selling size

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR17789 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.192 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Transfected cell line - Firefly |

| | |
|---|---|
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Firefly |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Transfected cell lysate - Firefly |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Transfected cell lysate - Firefly |
| **Dilution info** | 1/2000 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Firefly |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Transfected cell line - Firefly |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Transfected cell line - Firefly |
| **Dilution info** | 1/500 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Firefly |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Transfected cell lysate - Firefly |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information Luciferin 4-monooxygenase

| | |
|---|---|
| **Function** | Produces green light with a wavelength of 562 nm. |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**What is this antibody validated in?**
Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunocytochemistry/immunofluorescence (ICC/IF) in Firefly samples.

**What is the molecular weight of Firefly Luciferase?**
Anti-Firefly Luciferase [EPR17789] - N-terminal (ab185923) specifically detects a band for Firefly Luciferase (UniProt: P08659) at a molecular weight of 61kDa.

**Other related products**
We have a range of other formats of antibody clone [EPR17789] also available for your convenience: ab185923, Alexa Fluor® 488 - ab237251, Alexa Fluor® 647 - ab237252, PE - ab237253, Carrier free - ab238448

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

**Trial sizes available!**
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | Firefly luciferase also known as luc assay or luciferase protein is an enzyme that catalyzes the oxidation of luciferin resulting in bioluminescence. This protein has a molecular mass of approximately 61 kDa and is responsible for the characteristic glow of fireflies. The luciferase expression occurs mainly in the light-producing organs of fireflies such as in the insect Photinus pyralis where it plays an important role in light emission. |
| **Biological function summary** | Firefly luciferase converts chemical energy into light making it valuable for various biological applications as a reporter gene. It participates in the formation of a complex with its substrates luciferin and ATP resulting in the production of a photon. This enzyme is widely used in molecular and cellular biology experiments to monitor gene expression and study protein-protein interactions due to its luminescent properties. |

| | |
|---|---|
| **Pathways** | Firefly luciferase functions in the bioluminescent pathway involving the conversion of luciferin to oxyluciferin and light emission. It interfaces with ATP a universal energy carrier which highlights its integration into the cellular energy systems. Firefly luciferase is similar to other oxidative enzymes though it is not directly involved with metabolic pathways like the TCA cycle or glycolysis. |
| **Associated diseases and disorders** | Researchers often utilize firefly luciferase as a tool in tumor studies or infectious disease models. Its luminescence aids in imaging and tracking biological processes in real-time. While firefly luciferase itself is not directly associated with specific diseases the use of firefly agents allows researchers to study disease outcomes assess therapeutic efficacy and understand gene expression profiles related to cancer and viral infections often in connection with proteins such as p53 in cancer research. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

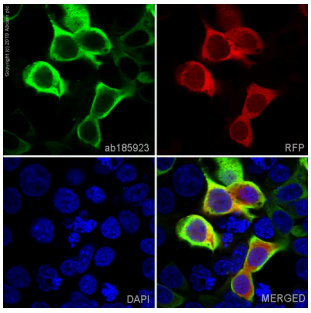
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

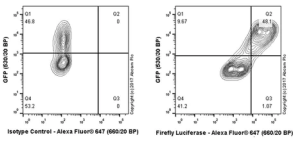
## 5 product images




## Immunocytochemistry/ Immunofluorescence - Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923)

Firefly Luciferase Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Firefly Luciferase antibody

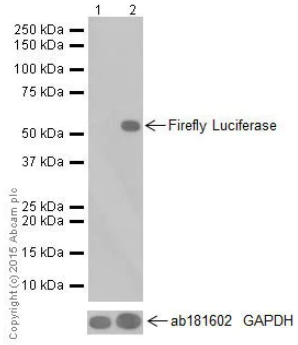
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293T (Human epithelial cells from embryonic kidney) cells transfected with Empty vector or Firefly Luciferase, labeling Firefly Luciferase with ab185923 at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green). Nuclear staining on HEK293T cells transfected with Firefly Luciferase is observed. The nuclear counter stain is DAPI (blue).



## Flow Cytometry - Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923)

Firefly Luciferase Flow Cytometry staining using rabbit Anti-Firefly Luciferase antibody

Flow Cytometry analysis of 293T (Human epithelial cell line from embryonic kidney) transfected with GFP tagged Firefly Luciferase cells labeling Firefly Luciferase with purified ab185923 at 1/200 dilution (10ug/ml, Right panel). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 647)(1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Left panel) was used as the isotype control.




## Western blot - Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923)

Blocking and dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923) at 1/2000 dilution

Lane 1:
Empty vector (vector control) transfected HEK293 (human embryonic kidney) whole cell lysate at 10 µg

Lane 2:
Firefly Luciferase transfected HEK293 (human embryonic kidney) whole cell lysate at 10 µg

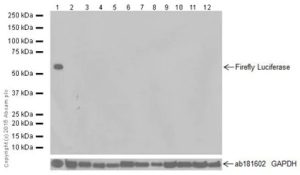
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 61 kDa

Observed band size: 61 kDa

Exposure time: 30s



## Western blot - Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923)

Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923) at 1/1000 dilution

Lane 1:
Firefly Luciferase transfected HEK293 (human embryonic kidney) whole cell lysate at 10 µg

Lane 2:
Mouse brain lysate at 10 µg

Lane 3:
Mouse heart lysate at 10 µg

Lane 4:
Mouse kidney lysate at 10 µg

Lane 5:
Mouse spleen lysate at 10 µg

Lane 6:
Rat brain lysate at 10 µg

Lane 7:
Rat kidney lysate at 10 µg

Lane 8:
Rat spleen lysate at 10 µg

Lane 9:
C6 (rat glioma) whole cell lysate lysate at 10 µg

Lane 10:
Raw264.7 (mouse abelson murine leukemia virus-induced tumor) whole cell lysate at 10 µg

Lane 11:
PC-12 (rat adrenal gland pheochromocytoma) whole cell lysate at 10 µg

Lane 12:
NIH/3T3 (mouse embryo) whole cell lysate at 10 µg

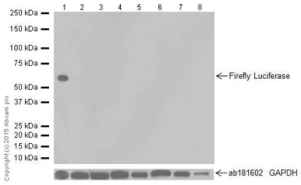
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 61 kDa

Observed band size: 61 kDa

Exposure time: 3min




## Western blot - Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923)

Blocking and dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Firefly Luciferase antibody [EPR17789] - N-terminal (ab185923) at 1/1000 dilution

Lane 1:
Firefly Luciferase transfected HEK293 (human embryonic kidney) whole cell lysate at 10 µg

Lane 2:
HeLa (human cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 3:
MCF-7 (human breast carcinoma) whole cell lysate at 20 µg

Lane 4:
Jurkat (human acute T cell leukemia) whole cell lysate at 20 µg

Lane 5:
SH-SY5Y (human neuroblastoma) whole cell lysate at 20 µg

Lane 6:
Human fetal heart lysate at 10 µg

Lane 7:
Human fetal kidney lysate at 10 µg

Lane 8:
Human fetal spleen lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 61 kDa

Observed band size: 61 kDa

Exposure time: 3min

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.