abcam

ab185924

Anti-Firefly Luciferase antibody [EPR17790]

Anti-Firefly Luciferase antibody [EPR17790] (ab185924) 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
- Over 10 publications

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	EPR17790
Purification technique	Affinity purification Protein A
Concentration	0.738 mg/mL The concentration of this product may be batch-dependent 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	1/20000
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

Anti-Firefly Luciferase antibody [EPR17790] (ab185924) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt, ICC/IF, WB in firefly samples.

Anti-Firefly Luciferase antibody [EPR17790] (ab185924) has been cited over 18 times in peer reviewed journals and is trusted by the scientific community.

Abcams high quality manufacturing and validation processes ensure Anti-Firefly Luciferase antibody [EPR17790] (ab185924) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.

Anti-Firefly Luciferase antibody [EPR17790] (ab185924) specifically detects Firefly Luciferase (UniProt ID: P08659; Molecular weight: 61kDa) and is sold in 100 uL and 1 mL selling sizes.

Conjugation-ready, carrier free format available for antibody clone EPR17790 - ab232629.

Antibody clone EPR17790 is also available pre-conjugated to a variety of labels for your convenience - Alexa Fluor® 488, Alexa Fluor® 647 (ab21495, ab23349).

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.

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

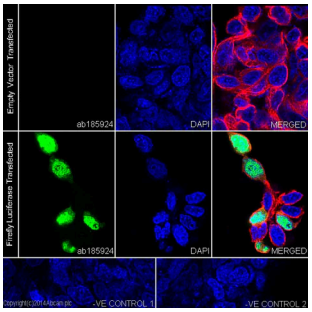
We do not recommend this combination. It is not covered by our product promise.

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.

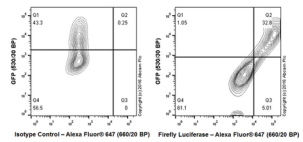
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-Firefly Luciferase antibody [EPR17790] (ab185924)

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

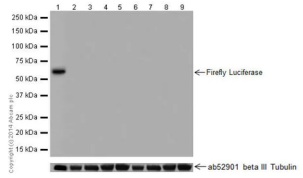
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK293T (Human epithelial cells from embryonic kidney) cells transfected with Empty vector or Firefly Luciferase, labeling Firefly Luciferase with ab185924 at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa 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). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows;
-ve control 1: ab185924 at 1/500 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Flow Cytometry - Anti-Firefly Luciferase antibody [EPR17790] (ab185924)

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

Flow Cytometry analysis of 293T (Human epithelial cell line from embryonic kidney) cells transfected with GFP tagged Firefly Luciferase labeled with purified ab185924 at 1/70 dilution (10µg/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 [EPR17790] (ab185924)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Firefly Luciferase antibody [EPR17790] (ab185924) at 1/1000 dilution

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

Lane 2:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 3:
MCF7 (Human breast adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 4:
Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate at 20 µg

Lane 5:
SH-SY5Y (Human neuroblastoma from bone marrow cells) whole cell lysate at 20 µg

Lane 6:
Human fetal brain lysate at 10 µg

Lane 7:
Human fetal heart lysate at 10 µg

Lane 8:
Human fetal kidney lysate at 10 µg

Lane 9:
Human fetal spleen lysate at 10 µg

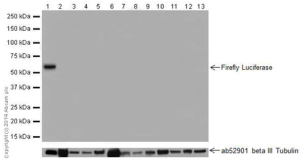
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 61 kDa

Observed band size: 61 kDa

Exposure time: 3min



Western blot - Anti-Firefly Luciferase antibody [EPR17790] (ab185924)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Firefly Luciferase antibody [EPR17790] (ab185924) 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 heart lysate at 10 µg

Lane 8:
Rat kidney lysate at 10 µg

Lane 9:
Rat spleen lysate at 10 µg

Lane 10:
C6 (Rat glial tumor cells) whole cell lysate at 10 µg

Lane 11:
RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

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

Lane 13:
NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate at 10 µg

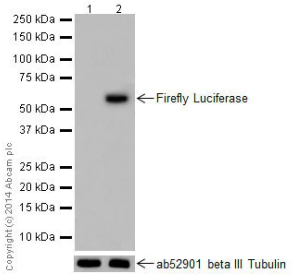
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 61 kDa

Observed band size: 61 kDa

Exposure time: 3min



Western blot - Anti-Firefly Luciferase antibody [EPR17790] (ab185924)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Firefly Luciferase antibody [EPR17790] (ab185924) at 1/20000 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:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 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'.