abcam

ab238448

Anti-Firefly Luciferase antibody [EPR17789] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR17789
Purification technique	Affinity purification Protein A
Concentration	1.015 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Firefly
Dilution info	-

Notes	-

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Expected

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

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Firefly
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat, Human
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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab238448 is the carrier-free version of ab185923.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

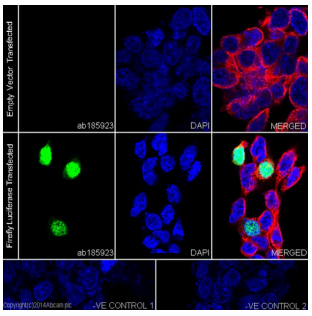
We do not recommend this combination. It is not covered by our product promise.

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.

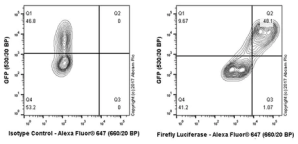
2 product images



Immunocytochemistry/ Immunofluorescence - Anti-Firefly Luciferase antibody [EPR17789] - BSA and Azide free (ab238448)

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). 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: ab185923 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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab185923).



Flow Cytometry - Anti-Firefly Luciferase antibody [EPR17789] - BSA and Azide free (ab238448)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab185923).

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