abcam

Product datasheet

Anti-PER2 antibody [EPR11381(2)] - BSA and Azide free ab238973

Recombinant RabMAb

6 Images

Overview

Product name	Anti-PER2 antibody [EPR11381(2)] - BSA and Azide free
Description	Rabbit monoclonal [EPR11381(2)] to PER2 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, ICC/IF, Flow Cyt (Intra) **Unsuitable for:** IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC/IF: HeLa cells.
General notes	ab238973 is the carrier-free version of **ab179813**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. 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. 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. 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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR11381(2)
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab238973 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. Predicted molecular weight: 137 kDa.
ICC/IF		Use at an assay dependent concentration.
Flow Cyt (Intra)		Use at an assay dependent concentration.

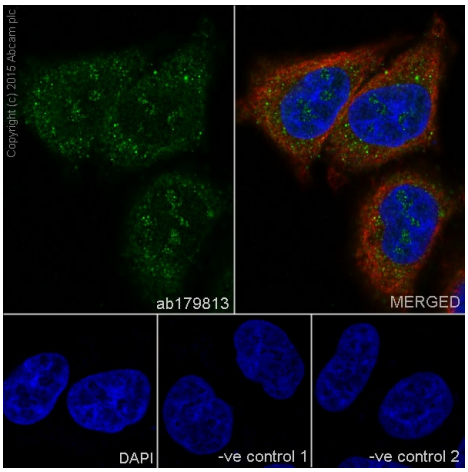
Application notes Is unsuitable for IHC-P.

Target

Function	Component of the circadian clock mechanism which is essential for generating circadian rhythms. Negative element in the circadian transcriptional loop. Influences clock function by interacting with other circadian regulatory proteins and transporting them to the nucleus. Negatively regulates CLOCK NPAS2-BMAL1 BMAL2-induced transactivation.
Tissue specificity	Widely expressed. Found in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. High levels in skeletal muscle and pancreas. Low level in lung.
Involvement in disease	Defects in PER2 are a cause of familial advanced sleep-phase syndrome (FASPS) [MIM:604348]. FASPS is characterized by very early sleep onset and offset. Individuals are 'morning larks' with a 4 hours advance of the sleep, temperature and melatonin rhythms.
Sequence similarities	Contains 1 PAC (PAS-associated C-terminal) domain.

	Contains 2 PAS (PER-ARNT-SIM) domains.
Post-translational modifications	Phosphorylated by CSNK1E and CSNK1D. Phosphorylation results in PER2 protein degradation.
Cellular localization	Nucleus. Cytoplasm. Mainly nuclear. Nucleocytoplasmic shuttling is effected by interaction with other circadian core oscillator proteins and/or by phosphorylation. Retention of PER1 in the cytoplasm occurs through PER1-PER2 heterodimer formation or by interaction with CSNK1E and/or phosphorylation which appears to mask the PER nuclear localization signal. Also translocated to the nucleus by CRY1 or CRY2.

Images



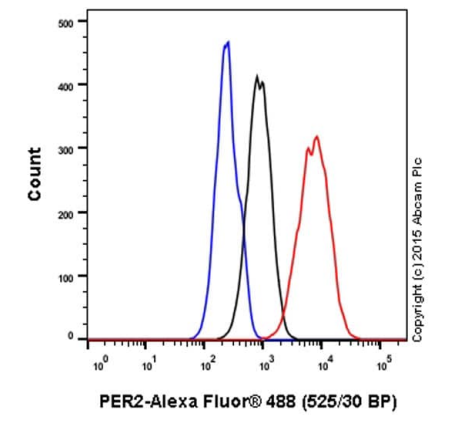
Immunocytochemistry/ Immunofluorescence - Anti-PER2 antibody [EPR11381(2)] - BSA and Azide free (ab238973)

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling PER2 with purified **ab179813** at a dilution of 1/200. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. **ab150077**, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain. **ab7291**, a mouse anti-tubulin (1/1000) and **ab150120**, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000) were also used.

Control 1: primary antibody (1/200) and secondary antibody, **ab150120**, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000).

Control 2: **ab7291** (1/1000) and secondary antibody, **ab150077**, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000).

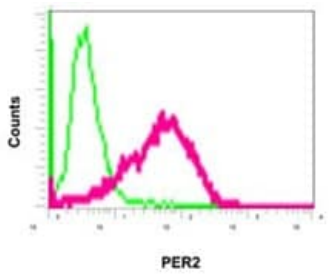
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab179813**).



Flow Cytometry (Intracellular) - Anti-PER2 antibody [EPR11381(2)] - BSA and Azide free (ab238973)

Intracellular Flow Cytometry analysis of HeLa cells labelling PER2 with purified **ab179813** at a dilution of 1/200 (red). Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.

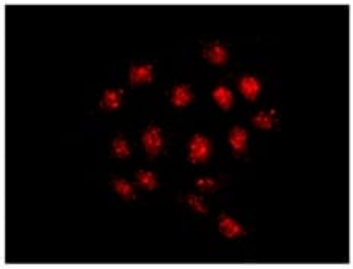
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab179813**).



Flow Cytometry (Intracellular) - Anti-PER2 antibody [EPR11381(2)] - BSA and Azide free (ab238973)

Intracellular flow cytometric analysis of permeabilized HeLa cells labeling PER2 with unpurified **ab179813** at a dilution of 1/10 (red) or a rabbit IgG (negative) (green).

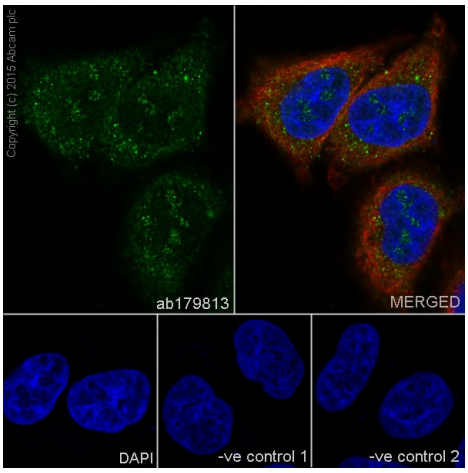
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab179813**).



Immunocytochemistry/ Immunofluorescence - Anti-PER2 antibody [EPR11381(2)] - BSA and Azide free (ab238973)

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labeling PER2 with unpurified **ab179813** at a dilution of 1/50.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab179813**).



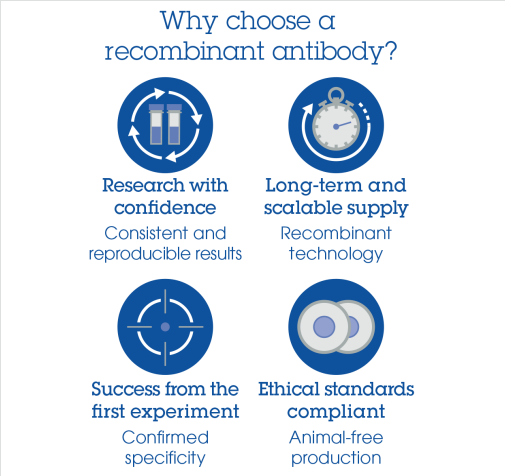
Immunocytochemistry/ Immunofluorescence - Anti-PER2 antibody [EPR11381(2)] - BSA and Azide free (ab238973)

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling PER2 with purified **ab179813** at a dilution of 1/200. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. **ab150077**, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain. **ab7291**, a mouse anti-tubulin (1/1000) and **ab150120**, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000) were also used.

Control 1: primary antibody (1/200) and secondary antibody, **ab150120**, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000).

Control 2: **ab7291** (1/1000) and secondary antibody, **ab150077**, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (**ab179813**).



Anti-PER2 antibody [EPR11381(2)] - BSA and Azide free (ab238973)

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