

Product datasheet

Anti-PER2 antibody [EPR11381(2)] ab179813

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [18 References](#) [7 Images](#)

Overview

Product name	Anti-PER2 antibody [EPR11381(2)]
Description	Rabbit monoclonal [EPR11381(2)] to PER2
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), WB, ICC/IF Unsuitable for: IHC-P
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A673, Y79, HeLa and BxPC-3 cell lysates. ICC/IF: HeLa cells. Flow Cyt (intra): HeLa cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR11381(2)

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab179813 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
Flow Cyt (Intra)		1/10 - 1/200. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/1000 - 1/10000. Predicted molecular weight: 137 kDa.
ICC/IF	★★★★★ (1)	1/50 - 1/200.

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.

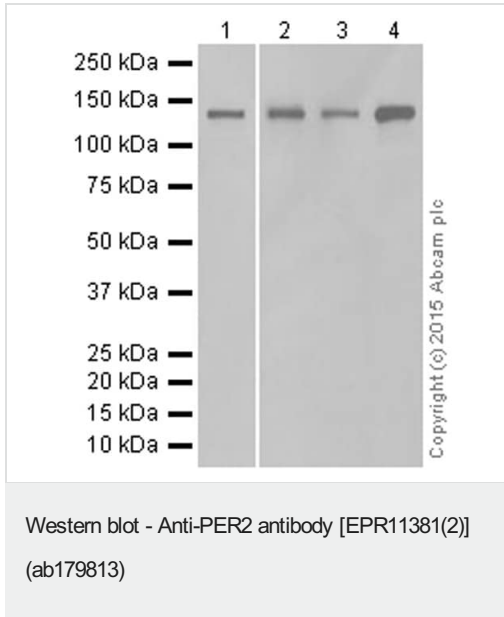
Post-translational modifications

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



All lanes : Anti-PER2 antibody [EPR11381(2)] (ab179813) at 1/5000 dilution (purified)

Lane 1 : HeLa whole cell lysate

Lane 2 : A673 whole cell lysate

Lane 3 : BxPC-3 whole cell lysate

Lane 4 : Y79 whole cell lysate

Lysates/proteins at 20 µg per lane.

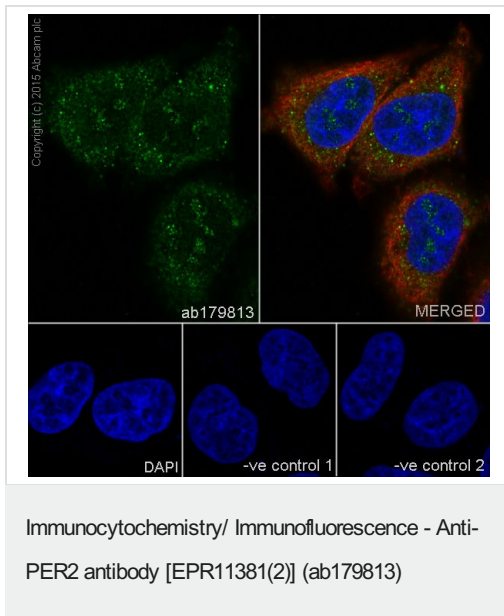
Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 137 kDa

Observed band size: 140 kDa

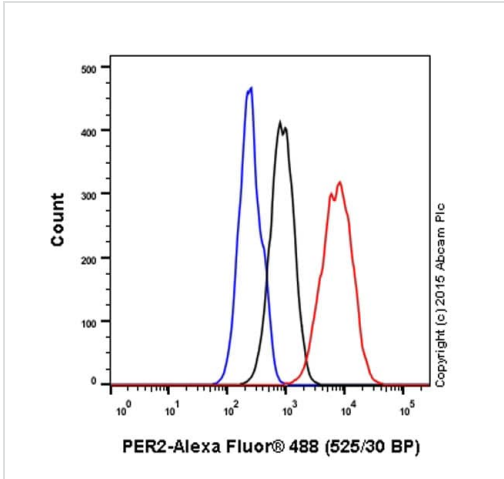
Blocking and dilution buffer: 5% NFDM/TBST.



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.

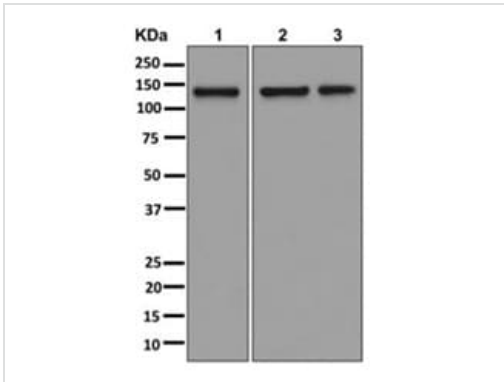
Control 1: primary antibody (1/200) and secondary antibody, **ab150120**, an Alexa Fluor[®] 594-conjugated goat anti-mouse IgG (1/1000).

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



Flow Cytometry (Intracellular) - Anti-PER2 antibody [EPR11381(2)] (ab179813)

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.



Western blot - Anti-PER2 antibody [EPR11381(2)] (ab179813)

All lanes : Anti-PER2 antibody [EPR11381(2)] (ab179813) at 1/1000 dilution (unpurified)

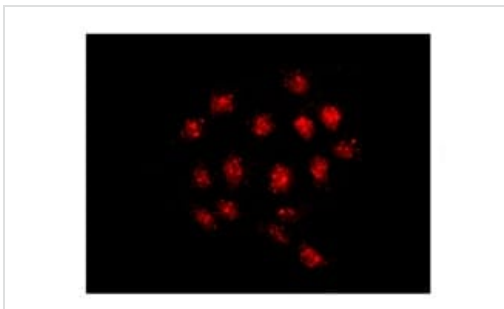
Lane 1 : A673 cell lysate

Lane 2 : HeLa cell lysate

Lane 3 : BxPC-3 cell lysate

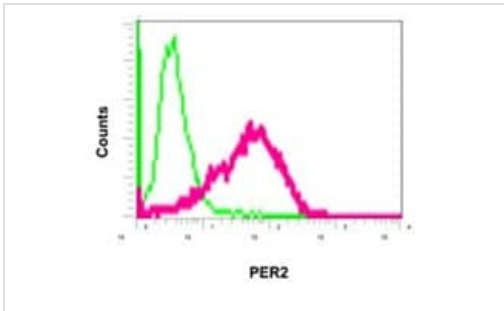
Lysates/proteins at 10 µg per lane.

Predicted band size: 137 kDa



Immunocytochemistry/ Immunofluorescence - Anti-PER2 antibody [EPR11381(2)] (ab179813)





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



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).

Flow Cytometry (Intracellular) - Anti-PER2 antibody [EPR11381(2)] (ab179813)

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-PER2 antibody [EPR11381(2)] (ab179813)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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