abcam

Product datasheet

Anti-PER2 (phospho S662) antibody [EPR19820] ab206377

Recombinant RabMAb

1 References 3 Images

Overview

Product name	Anti-PER2 (phospho S662) antibody [EPR19820]
Description	Rabbit monoclonal [EPR19820] to PER2 (phospho S662)
Host species	Rabbit
Tested applications	**Suitable for:** Dot blot, WB
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HEK-293T whole cell lysate transfected with hPER2.
General notes	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**.

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	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol (glycerin, glycerine), PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR19820
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab206377 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
Dot blot		1/1000.
WB		1/1000. Detects a band of approximately 180 kDa (predicted molecular weight: 137 kDa).

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.

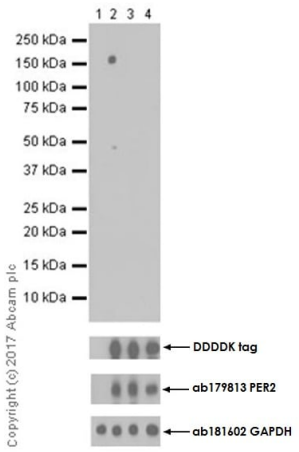
Involvement in disease Defects in PER2 are a cause of familial advanced sleep-phase syndrome (FASPS) [MIM:604348]. FASPS is characterized by very early sleep onset and offset. Individuals are 'morning larks' with a 4 hours advance of the sleep, temperature and melatonin rhythms.

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



Western blot - Anti-PER2 (phospho S662) antibody [EPR19820] (ab206377)

All lanes : Anti-PER2 (phospho S662) antibody [EPR19820] (ab206377) at 1/1000 dilution

Lane 1 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) transfected with empty vector whole cell lysate
Lane 2 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) transfected with hPER2 (WT) whole cell lysate
Lane 3 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) transfected with hPER2 (WT) whole cell lysate treated with alkaline phosphatase for 1 hour
Lane 4 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) transfected with hPER2 (S662A mutant) whole cell lysate

Lysates/proteins at 10 µg per lane.

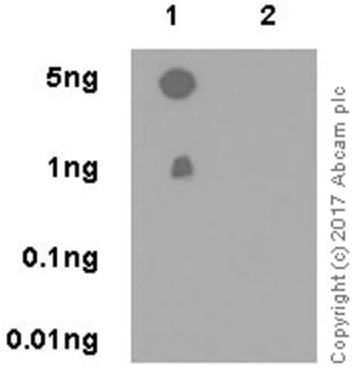
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 137 kDa
Observed band size: 170 kDa

Exposure time: 30 seconds

Blocking/Dilution buffer: 2% BSA/TBST.

The plasmids were kindly provided by our collaborator Dr. Yi Rao, Peking.



Dot Blot - Anti-PER2 (phospho S662) antibody [EPR19820] (ab206377)

Lane 1: PER2 (phospho S662) peptide labelled with ab206377 primary antibody at 1/1000 dilution and Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) secondary antibody at 1/100000 dilution.

Lane 2: PER2 non-phospho peptide labelled with ab206377 primary antibody at 1/1000 dilution and Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) secondary antibody at 1/100000 dilution.

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: 3 minutes

Anti-PER2 (phospho S662) antibody [EPR19820] (ab206377)

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