

## BMAL1 (Phospho Ser42) Rabbit pAb

CatalogNo: YP1278

### Key Features

#### Host Species

- Rabbit

#### Reactivity

- Human, Mouse, Rat

#### Applications

- WB

#### MW

- 69kD (Observed)

#### Isotype

- IgG

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### Recommended Dilution Ratios

WB 1:1000-2000

### Basic Information

**Clonality** Polyclonal

### Immunogen Information

**Immunogen** Synthesized phospho peptide around human BMAL1 (Ser42)

**Specificity** This antibody detects endogenous levels of Human Mouse Rat BMAL1 (phospho-Ser42)

### Target Information

**Gene name** ARNTL BHLHE5 BMAL1 MOP3 PASD3

**Protein Name**

BMAL1 (Ser42)

Organism	Gene ID	UniProt ID
Human	<a href="#">406;</a>	<a href="#">O00327;</a>
Mouse	<a href="#">11865;</a>	<a href="#">Q9WTL8;</a>
Rat	<a href="#">29657;</a>	<a href="#">Q9EPW1;</a>

**Cellular Localization**

Nucleus . Cytoplasm . Nucleus, PML body . Shuttles between the nucleus and the cytoplasm and this nucleocytoplasmic shuttling is essential for the nuclear accumulation of CLOCK, target gene transcription and the degradation of the CLOCK-ARNTL/BMAL1 heterodimer. The sumoylated form localizes in the PML body. Sequestered to the cytoplasm in the presence of ID2. .

**Tissue specificity**

Hair follicles (at protein level). Highly expressed in the adult brain, skeletal muscle and heart.

**Function**

Alternative products:Additional isoforms seem to exist,Function:ARNTL-CLOCK heterodimers activate E-box element (3'-CACGTG-5') transcription of a number of proteins of the circadian clock. This transcription is inhibited in a feedback loop by PER, and also by CRY proteins.,miscellaneous:CLOCK-ARNTL double mutations within the PAS domains result in synergistic desensitization to high levels of CRY on repression of CLOCK-ARNTL transcriptional activity of PER1 and, disrupt circadian rhythmicity.,PTM:Acetylated on Lys-538 upon dimerization with CLOCK. Acetylation facilitates CRY1-mediated repression.,PTM:Phosphorylated upon dimerization with CLOCK.,PTM:Sumoylated on Lys-259 upon dimerization with CLOCK.,similarity:Contains 1 basic helix-loop-helix (bHLH) domain.,similarity:Contains 1 PAC (PAS-associated C-terminal) domain.,similarity:Contains 2 PAS (PER-ARNT-SIM) domains.,subunit:Component of the circadian clock oscillator which includes the CRY proteins, CLOCK or NPAS2, ARNTL or ARNTL2, CSNK1D and/or CSNK1E, TIMELESS and the PER proteins. Efficient DNA binding requires dimerization with another bHLH protein. Heterodimerization with CLOCK is required for E-box-dependent transactivation, for CLOCK nuclear translocation and degradation, and, for phosphorylation of both CLOCK and ARNTL. Interaction with PER and CRY proteins requires translocation to the nucleus. Interaction of the CLOCK-ARNTL heterodimer with PER or CRY inhibits transcription activation. Interacts with HSP90; with AHR in vitro, but not in vivo.,tissue specificity:Highly expressed in the adult brain, skeletal muscle and heart.,

## Validation Data

## Contact information

Orders: [order.cn@immunoway.com](mailto:order.cn@immunoway.com)  
 Support: [support.cn@immunoway.com](mailto:support.cn@immunoway.com)  
 Telephone: 400-8787-807(China)  
 Website: <http://www.immunoway.com.cn>  
 Address: 2200 Ringwood Ave San Jose, CA 95131 USA



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