

BMAL1 (Phospho Ser42) Rabbit pAb

CatalogNo: YP1278

| Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB

MW

- 69kD (Observed)

Isotype

- IgG

| Recommended Dilution Ratios

WB 1:1000-2000

| 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.

| 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	406;	O00327;
Mouse	11865;	Q9WTL8;
Rat	29657;	Q9EPW1;

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

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