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 phosho 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 syngernistic 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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