



BMAL1 (phospho-Ser42) rabbit pAb

Catalog No	YP-Ab-01442
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB
Gene Name	ARNTL BHLHE5 BMAL1 MOP3 PASD3
Immunogen	Synthesized phosho peptide around human BMAL1 (Ser42)
Specificity	This antibody detects endogenous levels of Human Mouse Rat BMAL1 (phospho-Ser42)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit serum by affinity-chromatography using specific immunogen.
Dilution	WB 1:1000-2000
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	ARNT like protein 1 brain and muscle;Arntl;Aryl hydrocarbon receptor nuclear translocator like;Aryl hydrocarbon receptor nuclear translocator like protein 1; Aryl hydrocarbon receptor nuclear translocator-like protein 1;Basic helix loop helix PAS orphan MOP3;Basic helix loop helix PAS protein MOP3;Basic-helix-loop-helix-PAS protein MOP3;bHLH PAS protein JAP3;bHLH-PAS protein JAP3; bHLHe5;BMAL 1;BMAL1_HUMAN;BMAL1c;Brain and muscle ARNT like 1;Brain and muscle ARNT-like 1;CG8727 PA;Class E basic helix-loop-helix protein 5; cycle;JAP 3;JAP3;Member of PAS protein 3;Member of PAS superfamily 3; MGC47515;MOP 3;MOP3;PAS domain-containing protein 3;PASD 3;PASD3; TIC;BMAL1;ARNTL BHLHE5 BMAL1 MOP3 PASD3;BMAL1 (Ser42);Aryl hydrocarbon receptor nuclear translocator-like protein 1 (Basic-helix-loop-helix-PAS protein MOP3) (Brain and muscle ARNT-like 1) (Class E basic helix-loop-helix protein 5) (bHLHe5) (Member of PAS protein 3) (PAS domain-containing protein 3) (bHLH-PAS protein JAP3)
Observed Band	69kDa
Calculated Molecular Weight	78kDa
Cell Pathway	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
Background	The protein encoded by this gene is a basic helix-loop-helix protein that forms a heterodimer with CLOCK. This heterodimer binds E-box enhancer elements upstream of Period (PER1, PER2, PER3) and Cryptochrome (CRY1, CRY2) genes and activates transcription of these genes. PER and CRY proteins heterodimerize and repress their own transcription by interacting in a feedback loop with CLOCK/ARNTL complexes. Defects in this gene have been linked to infertility, problems with gluconeogenesis and lipogenesis, and altered sleep patterns. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2014],
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

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