

**BMAL1 Monoclonal Antibody**

<b>Catalog No :</b>	YM0071
<b>Reactivity :</b>	Human
<b>Applications :</b>	WB;IHC;IF;ELISA
<b>Target :</b>	BMAL1
<b>Fields :</b>	>>Circadian rhythm;>>Dopaminergic synapse
<b>Gene Name :</b>	ARNTL
<b>Protein Name :</b>	Aryl hydrocarbon receptor nuclear translocator-like protein 1
<b>Human Gene Id :</b>	406
<b>Human Swiss Prot No :</b>	O00327
<b>Mouse Swiss Prot No :</b>	Q9WTL8
<b>Immunogen :</b>	Purified recombinant fragment of human BMAL1 expressed in E. Coli.
<b>Specificity :</b>	BMAL1 Monoclonal Antibody detects endogenous levels of BMAL1 protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Monoclonal, Mouse
<b>Dilution :</b>	WB 1:500 - 1:2000. IHC 1:200 - 1:1000. ELISA: 1:10000.. IF 1:50-200
<b>Purification :</b>	Affinity purification
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Molecularweight :</b>	69kD
<b>Cell Pathway :</b>	Circadian rhythm;

**P References :**

1. Chronobiol Int. 2007;24(5):783-92.
  2. Mol Cell Biol. 2008 Oct;28(19):6056-65.
  3. J Affect Disord. 2009 Sep;117(1-2):87-97.
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**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],

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**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

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**Subcellular Location :**

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. .

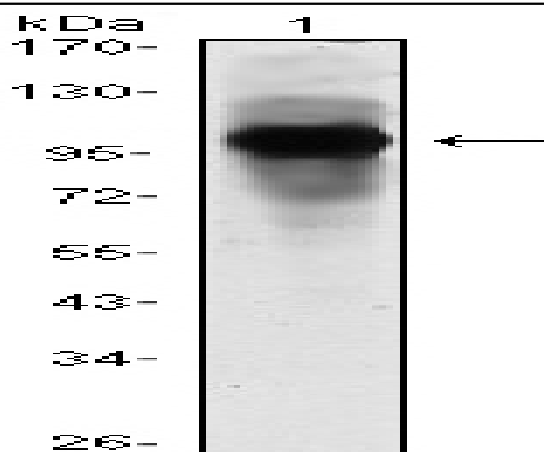
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**Expression :**

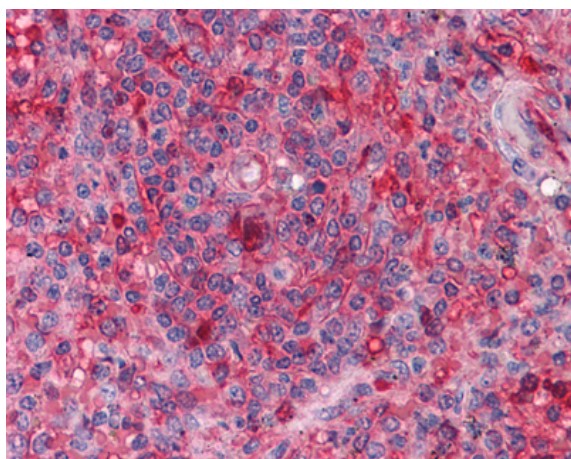
Hair follicles (at protein level). Highly expressed in the adult brain, skeletal muscle and heart.

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## Products Images



Western Blot analysis using BMAL1 Monoclonal Antibody against ARBTL-hlgGfc transfected HEK293 cell lysate.



Immunohistochemistry analysis of paraffin-embedded human Spleen tissues with AEC staining using BMAL1 Monoclonal Antibody.