



BMAL1 Polyclonal Antibody

Catalog No	YP-Ab-02244
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB;IHC;IF;ELISA
Gene Name	ARNTL
Immunogen	The antiserum was produced against synthesized peptide derived from human BMAL1 around the non-acetylation site of Lys538. AA range:501-550
Specificity	BMAL1 Polyclonal Antibody detects endogenous levels of BMAL1 protein only when acetylation at K538.
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 antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	WB: 1/500 - 1/2000. IHC-p: 1/100-1/300. ELISA: 1/20000.. IF 1:50-200
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	ARNTL;ARNT3;Aryl hydrocarbon receptor nuclear translocator-like protein 1; Basic helix-loop-helix ARNT-like protein 1;Basic-helix-loop-helix-PAS protein MOP3;BMAL1;BHLHE5;MOP3;PASD3;Brain and muscle ARNT-like 1Class E basic helix-loop-helix protein 5;Member of PAS protein 3;PAS domain-containing protein 3;bHLH-PAS protein JAP3
Observed Band	75kD
Calculated Molecular Weight	75kD
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

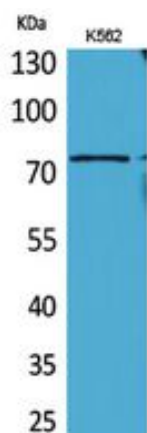
Avoid repeated freezing and thawing!

Usage suggestions

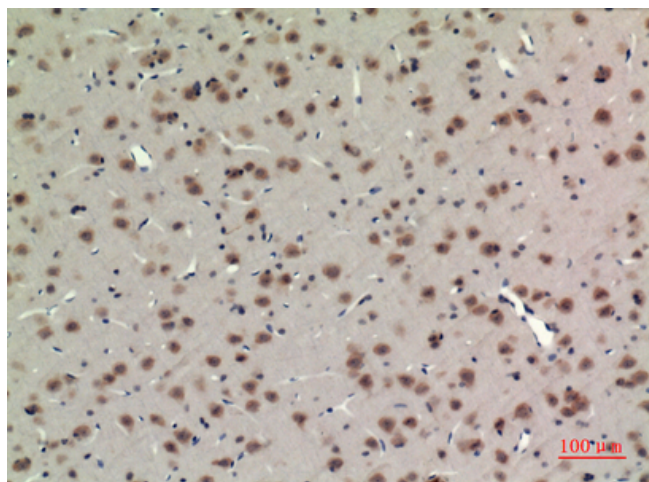
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



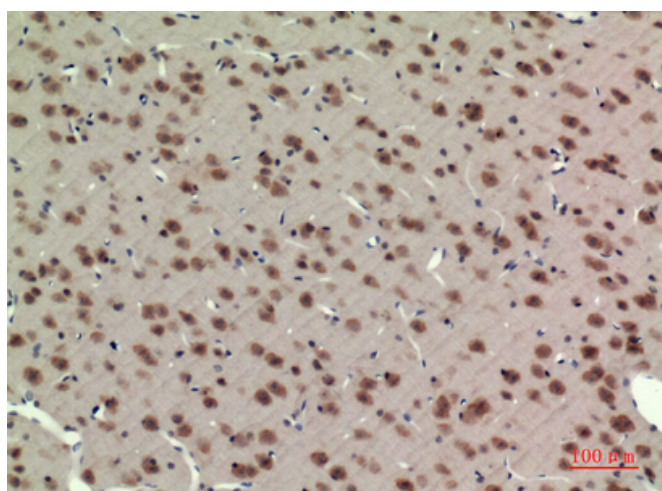
Products Images



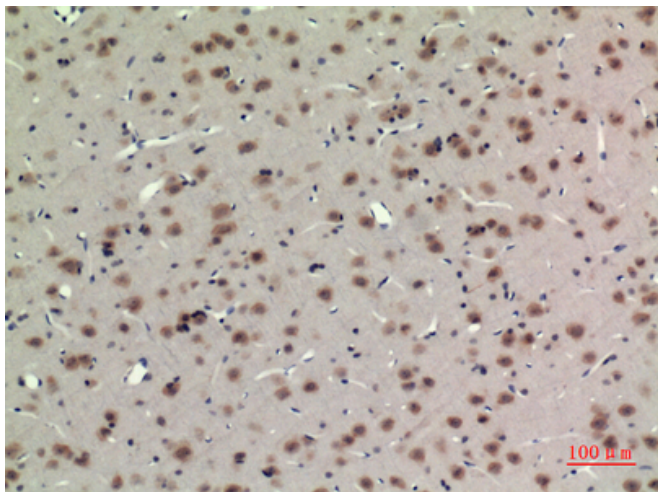
Western Blot analysis of K562 cells using BMAL1 Polyclonal Antibody. Secondary antibody(catalog#:RS0002) was diluted at 1:20000 cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003, Inventbiotech, MN, USA).



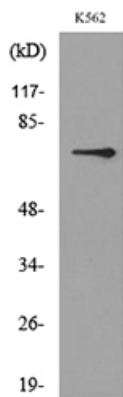
Immunohistochemical analysis of paraffin-embedded rat-brain, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded rat-brain, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded rat-brain, antibody was diluted at 1:100



Western blot analysis of lysate from K562 cells, using BMAL1 Antibody.