SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-BMAL1 antibody

Catalog Number: SL22927R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	BMAL1
Immunogen:	KLH conjugated synthetic peptide derived from human BMAL1: 251-350/626
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:400-800 IHC-F=1:400-800 IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human(predicted:Mouse,Chicken,Pig,Cow,Rabbit,Sheep)
Predicted MW.:	69kDa
Subcellular Location:	The nucleus cytoplasmic
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. The protein regulates interferon-stimulated gene expression and is an important factor in viral infection, including COVID-19. [provided by RefSeq, Oct 2021] **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

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	proteins. **Subunit:** Interacts with CRY2. 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. Part of a nuclear complex which also includes GNB2L1/RACK1 and PRKCA; GNB2L1 and PRKCA are recruited to the complex in a circadian manner. **Subcellular Location:** Nucleus. **Tissue Specificity:** Highly expressed in the adult brain, skeletal muscle and heart. **Post-translational modifications:** Acetylated on Lys-538 upon dimerization with CLOCK. Acetylation facilitates CRY1-mediated repression. Phosphorylated upon dimerization with CLOCK. Sumoylated on Lys-259 upon dimerization with CLOCK. **Similarity:** Contains 1 basic helix-loop-helix (bHLH) domain. Contains 1 PAC (PAS-associated C-terminal) domain. Contains 2 PAS (PER-ARNT-SIM) domains. **Database links:** **Entrez Gene:** 406 Human **Entrez Gene:** 11865 Mouse **Entrez Gene:** 29657 Rat Omim: 602550 Human **SwissProt:** O00327 Human **SwissProt:** Q9WTL8 Mouse **SwissProt:** Q9EPW1 Rat **Unigene:** 65734 Human **Unigene:** 33970 Mouse **Unigene:** 440371 Mouse **Unigene:** 14532 Rat

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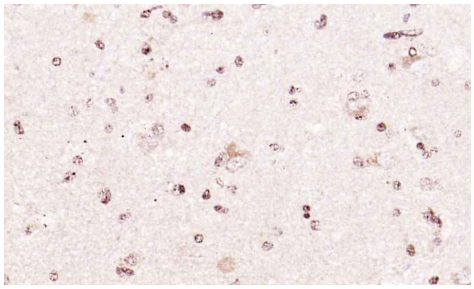
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[VALIDATION IMAGES]



Paraformaldehyde-fixed, paraffin embedded (human brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (BMAL1) Polyclonal Antibody, Unconjugated (SL22927R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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