



Rabbit Anti-BMAL1 antibody

SL3750R

Product Name:	BMAL1
Chinese Name:	芳香烃受体核转录蛋白样1抗体
Alias:	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; bHLH PAS protein JAP3; bHLHe5; BMAL 1; BMAL1c; Brain and muscle ARNT like 1; cycle; JAP 3; JAP3; Member of PAS protein 3; Member of PAS superfamily 3; MOP3; PAS domain-containing protein 3; PASD 3; PASD3; TIC.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1ug/TestIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	69kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human BMAL1:151-250/626
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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.

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.

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.

SWISS:

O00327

Gene ID:

406

Database links:

[Entrez Gene: 406](#)Human

[Entrez Gene: 11865](#)Mouse

[Entrez Gene: 29657](#)Rat

[Oimim: 602550](#)Human

[SwissProt: O00327](#)Human

[SwissProt: Q9WTL8](#)Mouse

[SwissProt: Q9EPW1](#)Rat

[Unigene: 65734](#)Human

[Unigene: 33970](#)Mouse

[Unigene: 440371](#)Mouse

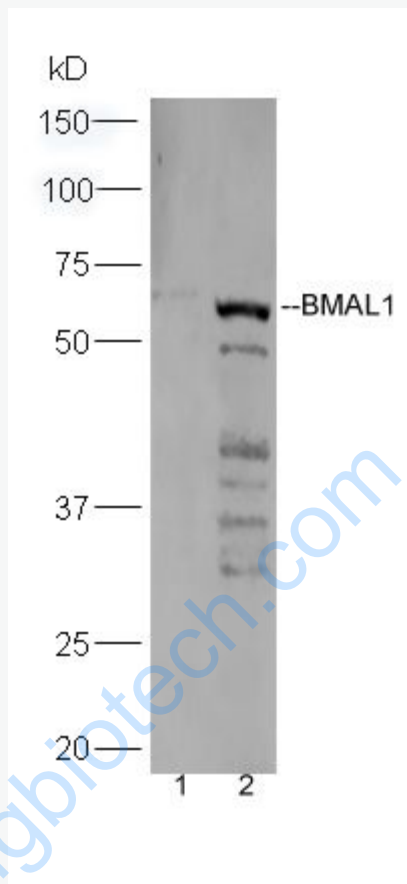
[Unigene: 14532](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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Picture:



Sample:

Hela Cell Lysate at 30 ug

293T Cell Lysate at 30 ug

Primary: Anti-BMAL1 (SL3750R) at 1:300 dilution;

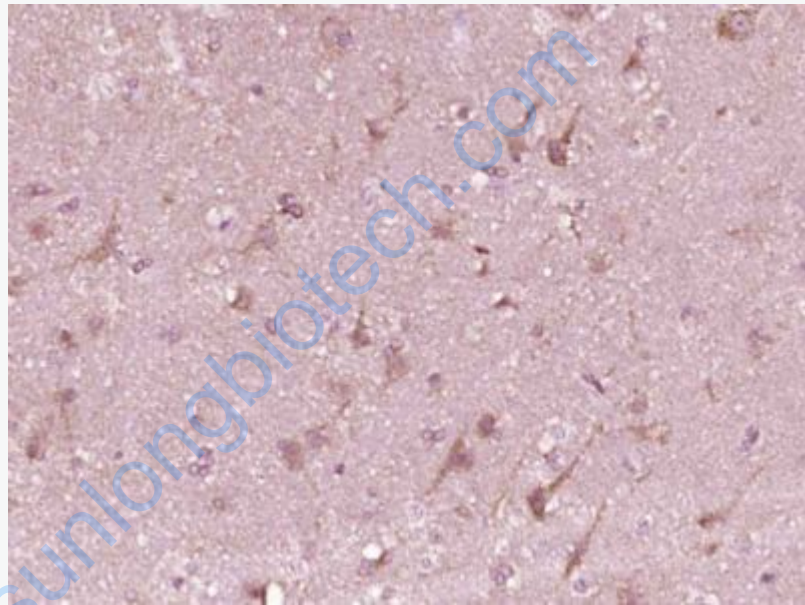
Secondary: HRP conjugated Goat-Anti-rabbit IgG(bse-0295G-HRP) at 1: 5000 dilution;

Predicted band size:69 kD Observed band size:64 kD

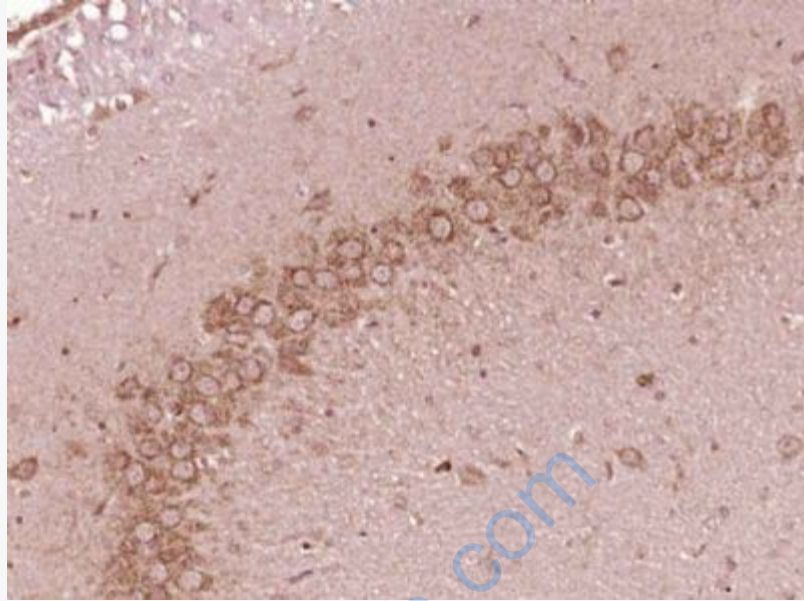


Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by

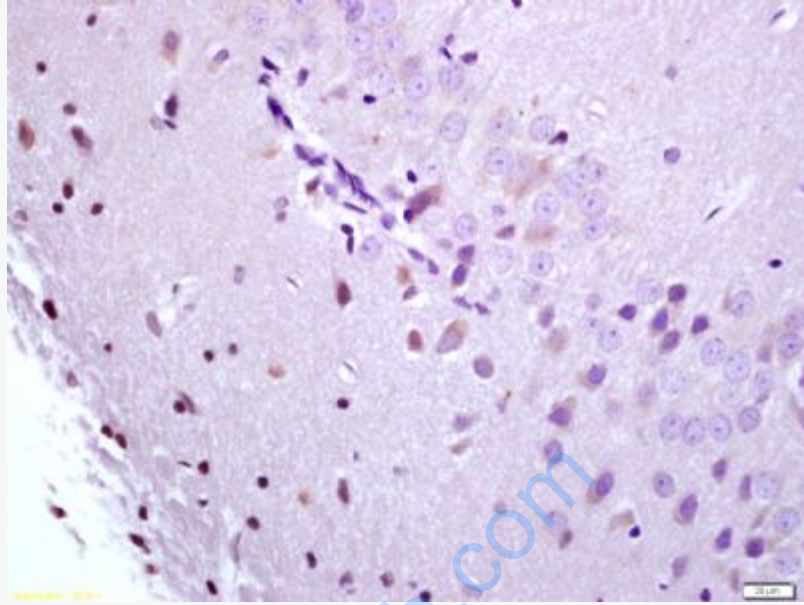
boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (BMAL1) Polyclonal Antibody, Unconjugated (SL3750R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



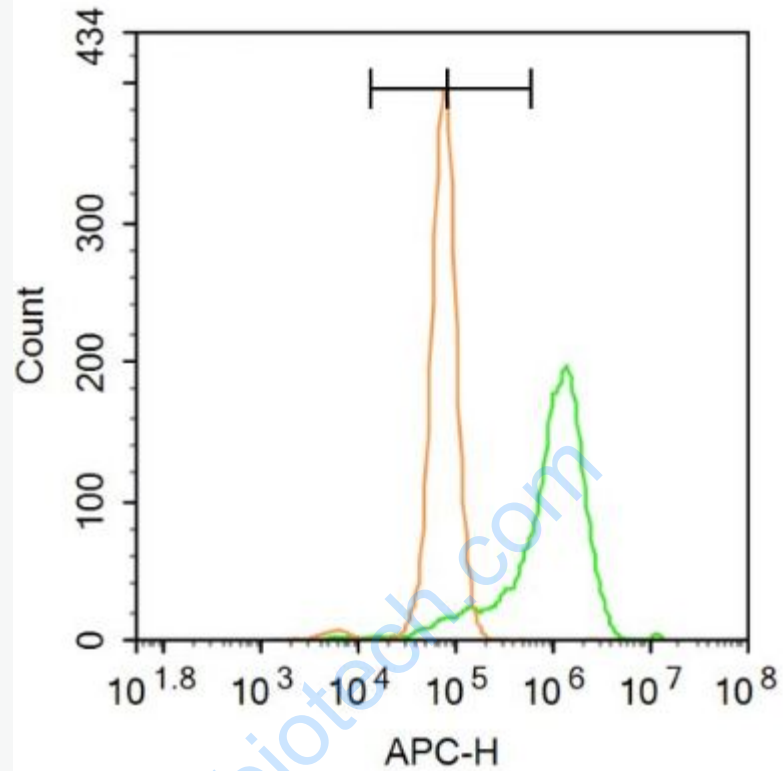
Paraformaldehyde-fixed, paraffin embedded (Human brain glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (BMAL1) Polyclonal Antibody, Unconjugated (SL3750R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Rat 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 (SL3750R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-BMAL1 Polyclonal Antibody, Unconjugated(SL3750R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control:A431.

Primary Antibody (green line): Rabbit Anti-BMAL1 antibody (SL3750R)

Dilution: $1\mu\text{g} / 10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-AF647

Dilution: $1\mu\text{g} / \text{test}$.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at -20°C . The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room

temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.

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