



## Rabbit Anti-KAT13D/CLOCK antibody

SL6346R

<b>Product Name:</b>	KAT13D/CLOCK
<b>Chinese Name:</b>	生物钟KAT13D蛋白抗体
<b>Alias:</b>	Circadian locomoter output cycles kaput protein; Circadian Locomotor Output Cycles Kaput; Circadian Locomotor Output Cycles Kaput; Circadium Locomotor Output Cycles Kaput; Circadium Locomotor Output Cycles Kaput; Clock homolog; Clock protein; hCLOCK; KIAA0334; CLOCK_HUMAN.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,Sheep,
<b>Applications:</b>	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	95 kDa
<b>Cellular localization:</b>	The nucleuscytoplasmic
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human KAT13D/CLOCK:21-120/846
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	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.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	This gene product regulates circadian rhythm and metabolism. The protein encodes a transcription factor of the basic helix-loop-helix (bHLH) family and a DNA binding histone acetyltransferase. Polymorphisms in this gene may be associated with behavioral changes in certain populations and with obesity and metabolic syndrome. Alternative

splicing results in multiple transcript variants.

**Function:**

ARNTL/2-CLOCK heterodimers activate E-box element (3'-CACGTG-5') transcription of a number of proteins of the circadian clock. Activates transcription of PER1 and PER2. This transcription is inhibited in a feedback loop by PER and CRY proteins. Has intrinsic histone acetyltransferase activity and this enzymatic function contributes to chromatin-remodeling events implicated in circadian control of gene expression (By similarity). Acetylates primarily histones H3 and H4 (By similarity). Acetylates also a non-histone substrate: ARNTL.

**Subunit:**

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 ARNTL 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. Binds weakly ARNTL and ARNTL2 to form heterodimers which bind poorly to the E-box motif

**Subcellular Location:**

Cytoplasm. Nucleus. Shuffling between the cytoplasm and the nucleus is under circadian regulation and is ARNTL-dependent. Phosphorylated form located in the nucleus.

**Tissue Specificity:**

Expressed in all tissues examined including spleen, thymus, prostate, testis, ovary, small intestine, colon, leukocytes, heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Highest levels in testis and skeletal muscle. Low levels in thymus, lung and liver. Expressed in all brain regions with highest levels in cerebellum. Highly expressed in the suprachiasmatic nucleus (SCN).

**Post-translational modifications:**

Phosphorylation is dependent on CLOCK-ARNTL heterodimer formation.

**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:**

O15516

**Gene ID:**

9575

**Database links:**

[Entrez Gene: 9575](#)Human

[Entrez Gene: 12753](#)Mouse

[Entrez Gene: 60447](#)Rat

[Omin: 601851](#)Human

[SwissProt: O15516](#)Human

[SwissProt: O08785](#)Mouse

[SwissProt: Q9WVS9](#)Rat

[Unigene: 436975](#)Human

[Unigene: 3552](#)Mouse

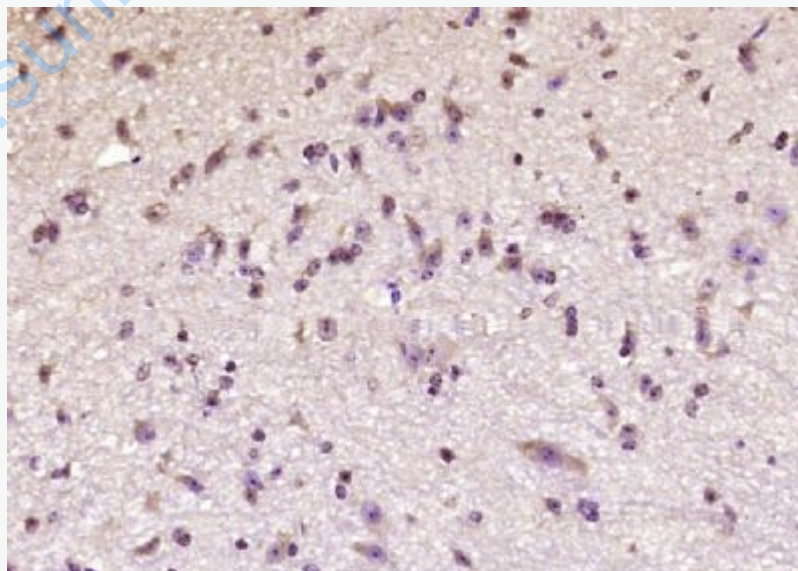
[Unigene: 392894](#)Mouse

[Unigene: 205839](#)Rat

**Important Note:**

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

**Picture:**



Paraformaldehyde-fixed, paraffin embedded (mouse cerebellum tissue); 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 (KAT13D) Polyclonal Antibody, Unconjugated (SL6346R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

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