

# Cry1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP6134a

## Product Information

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<b>Application</b>	WB, IHC-P, E
<b>Primary Accession</b>	<a href="#">Q16526</a>
<b>Other Accession</b>	<a href="#">Q8WP19</a>
<b>Reactivity</b>	Human
<b>Predicted</b>	Monkey
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB1844
<b>Antigen Region</b>	556-586

## Additional Information

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<b>Other Names</b>	Cryptochrome-1, CRY1, PHLL1
<b>Target/Specificity</b>	This Cry1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 556-586 amino acids from the C-terminal region of human Cry1.
<b>Dilution</b>	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	Cry1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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### Background

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Various biochemical, physiological and behavioural processes display circadian rhythms controlled by an internal biological clock. The central ?gears? driving this clock appear to be composed of an autoregulatory transcription/posttranslation-based feedback loop. Cryptochrome 1 (CRY1) and 2 (CRY2) are DNA-binding flavoproteins that bear some homology to blue-light receptors and photolyases. In *Drosophila*, CRY is a photoreceptor for the circadian clock where it binds to the clock component TIM in a light-dependent

fashion and blocks its function. Mammalian CRY1 and CRY2 function via light-independent interactions with circadian genes CLOCK and BMAL1, as well as with PER1, PER2, and TIM. They seem to act as light-independent components of the circadian clock and likely regulate Per1 transcriptional cycling via interactions with both the activator and its feedback inhibitors. Mutant mice not expressing the Cry1 or Cry2 protein display accelerated and delayed periodicity of locomotor activity, respectively. It appears that the combination of both proteins working together is essential to synchronize the organism to circadian phases. A critical balance between Cry1 and Cry2 is required for proper clock function; in complete darkness, double-mutant mice present with instantaneous arrhythmicity, indicating the absence of an internal circadian clock.

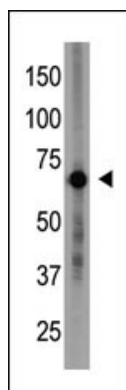
## References

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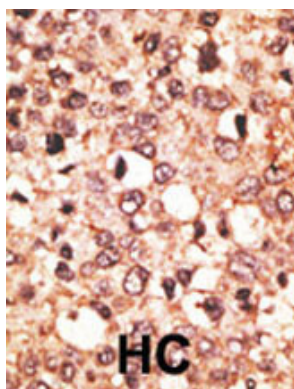
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van der Horst, G.T., et al., *Nature* 398(6728):627-630 (1999).  
Kobayashi, K., et al., *Nucleic Acids Res.* 26(22):5086-5092 (1998).  
Hsu, D.S., et al., *Biochemistry* 35(44):13871-13877 (1996).  
van der Spek, P.J., et al., *Genomics* 37(2):177-182 (1996).

## Images

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The anti-Cry1 N-term Pab (Cat. #AP6134a) is used in Western blot to detect Cry1 in placenta tissue lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

## Citations

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- [Knockout of three aminopeptidase N genes does not affect susceptibility of \*Helicoverpa armigera\* larvae to \*Bacillus thuringiensis\* Cry1A and Cry2A toxins](#)
- [CRISPR/Cas9 mediated genome editing of \*Helicoverpa armigera\* with mutations of an ABC transporter gene \*HaABCA2\* confers resistance to \*Bacillus thuringiensis\* Cry2A toxins.](#)