



CRY2, cryptochrome 2 polyclonal antibody

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Box 1 | Basic Info

Cat. No.	ABP-PAB-10598
Animal ID	RB1845-1846
Host	Rabbit
Reactivity	Human, Mouse
Format	Purified
Accession number	XM_051030
Amount	100 µg

Alternative Name(s): HCRY2, PHLL2, KIAA0658, Cry2

References:

1. Griffin EA Jr, Staknis D, Weitz CJ: Light-independent role of CRY1 and CRY2 in the mammalian circadian clock. *Science* 286(5440): 768-771 (1999).
2. van der Horst GT, Muijtjens M, Kobayashi K, Takano R, Kanno S, Takao M, de Wit J, Verkerk A, Eker AP, van Leenen D, Buijs R, Bootsma D, Hoeijmakers JH, Yasui A: Mammalian Cry1 and Cry2 are essential for maintenance of circadian rhythms. *Nature* 398(6728): 627-630 (1999).
3. Kobayashi K, Kanno S, Smit B, van der Horst GT, Takao M, Yasui A: Characterization of photolyase/blue-light receptor homologs in mouse and human cells. *Nucleic Acids Res.* 26(22): 5086-5092 (1998).
4. Ishikawa K, Nagase T, Suyama M, Miyajima N, Tanaka A, Kotani H, Nomura N, Ohara O: Prediction of the coding sequences of unidentified human genes. X. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro. *DNA Res.* 5(3): 169-176 (1998).
5. Hsu DS, Zhao X, Zhao S, Kazantsev A, Wang RP, Todo T, Wei YF, Sancar A: Putative human blue-light photoreceptors hCRY1 and hCRY2 are flavoproteins. *Biochemistry* 35(44): 13871-13877 (1996).

Many biochemical, physiological and behavioural processes show circadian rhythms which are generated by an internal time-keeping mechanism referred to as the biological clock. According to rapidly developing models, the core oscillator driving this clock is composed of an autoregulatory transcription-(post) translation-based feedback loop involving a set of 'clock' genes. Molecular clocks do not oscillate with an exact 24-hour rhythmicity but are entrained to solar day/night rhythms by light. Cryptochrome 1 (CRY1) and 2 (CRY2) are DNA-binding flavoproteins with similarities 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 or CRY2 (or both) show light-independent interactions with CLOCK and BMAL1, as well as with PER1, PER2, and TIM. They seem to act as light-independent components of the circadian clock and probably regulate Per1 transcriptional cycling by contacting both the activator and its feedback inhibitors. Mice lacking the Cry1 or Cry2 protein display accelerated and delayed free-running periodicity of locomotor activity, respectively, and it appears that both proteins are essential for the maintenance of circadian rhythmicity. Strikingly, in the absence of both proteins, an instantaneous and complete loss of free-running rhythmicity is observed.

Buffers

Purified rabbit polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column and eluted out with both high and low pH buffers and neutralized immediately after elution then followed by dialysis against PBS.

Immunogen

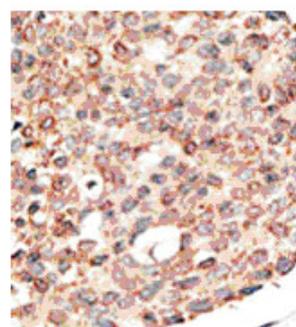
KLH conjugated synthetic peptide comprised of amino acids 579 - 593 [RVAELPTPELPSKDA] of the human cryptochrome 2 (CRY2) protein.

Application:

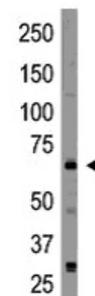
Tested by peptide-specific ELISA (1:1,000). WB (1:100 ~1:500), IHC (1:50 ~1:100)

Storage:

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C. Avoid repeated freeze-thaw cycles.



Human Breast Carcinoma



WB analysis of mouse liver tissue lysate