



Code No.KAL-KI046-EX

For research use only

## Anti-Human PERIOD3 polyclonal antibody, Rabbit

Most organisms show circadian 24-h rhythmicity in their behavior and physiology. In mammals, biological clock is located in the suprachiasmatic nucleus (SCN), generates circadian rhythms in behaviour and physiology. These biological rhythms are adjusted daily to the environmental light/dark cycle via the retinohypothalamic tract (RHT). Three mammalian period genes (*per1*, *per2*, and *per3*) that resemble the clock-regulating gene of *Drosophila melanogaster*, *period* (*per*), have been cloned. Circadian clocks are also located in peripheral tissues of mammals that are synchronized by the SCN. A molecular description of the mammalian circadian system has revealed that circadian oscillations may be a fundamental property of many cells in the body.

Recently, it has been shown that the phosphorylation of PER proteins by casein kinase I $\epsilon$  can modulate the nuclear localization of mPER1 and mPER3 but not of mPER2.

This antibody is useful tool to clarify molecular functions that regulate biological clock.

Package Size	200 $\mu$ g (200 $\mu$ L / vial)
Format	Rabbit polyclonal antibody, 1 mg/mL
Buffer	Block Ace as a stabilizer, containing 0.1% Proclin as a bacteriostat
Storage	Below $-20^{\circ}\text{C}$ until needed.
Purification method	This antibody was purified from rabbit serum by Protein G affinity chromatography.

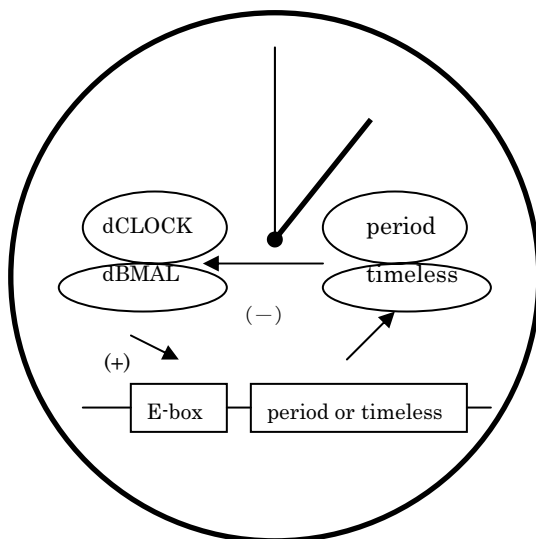


Fig.  
The negative feedback model of molecular biological clock.

CLOCK-BMAL1 dimers were shown to transactivate the expression of *period* and *timeless* genes. Furthermore, PER-TIM plays a role as the repressor of CLOCK-BMAL1-mediated reporter induction.

Ref.1



For research use only

## Anti-Human PERIOD3 polyclonal antibody, Rabbit

### 【Reference】

1. Ishida N. et al., Proc.Natl.Acad.Sci.96:8819—8820(1999).
2. Miyazaki K. et al., Mol. Cell. Biol.21(19): 6651—6659 (2001).
3. Alberecht U. et al., Cell 91:1055—1064 (1997).
4. Kume K. et al., Cell 98:193—205 (1999).
5. Sakamoto K. et al., J.Biol.Chem.273:27039—27042 (1998).
6. Shearman L.P. et al., Science 288:1013—1019 (2000).
7. Shearman L.P. et al., Neuron 19:1261—1269 (1997).
8. Saez L. et al., Neuron 17:911—920 (1996).
9. Takumi T. et al., Genes Cells 3:167—176(1998).
10. Takumi T. et al., EMBO J. 17:4753—4759(1998).
11. Yagita K. et al., Genes Dev. 14:1353—1363(2000).
12. Zheng B. et al., Nature 400:169—173(1999).
13. Zylka M.J. et al., Neuron 20:1103—1110(1998).
14. Toh K.L. et al., Science 291:1040-1043(2001).

### Distributor



COSMO BIO Co., LTD.  
Inspiration for Life Science

TOYO EKIMAE BLDG. 2-20, TOYO 2CHOME  
KOTO-KU, TOKYO 135-0016, JAPAN  
TEL : +81-3-5632-9617  
FAX : +81-3-5632-9618  
URL : <http://www.cosmobio.co.jp/>  
e-mail : [export@cosmobio.co.jp](mailto:export@cosmobio.co.jp)

### Manufacturer

 TransGenic Inc.

7-1-6 Minatojiminami-machi,  
Chuo-ku, Kobe,650-0047 JAPAN  
TEL : +81-78-306-0590  
FAX : +81-78-306-0589  
URL : <http://www.transgenic.co.jp/>  
e-mail : [techstaff@transgenic.co.jp](mailto:techstaff@transgenic.co.jp)