Datasheet for ABIN7162911

anti-PER3 antibody (AA 1-131)

4 Images

Go to Product page

Overview

Quantity:	100 µg
Target:	PER3
Binding Specificity:	AA 1-131
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PER3 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunofluorescence (IF)

Product Details

Immunogen:	Recombinant Human Period circadian protein homolog 3 protein (1-131AA)
Isotype:	IgG
Cross-Reactivity:	Human, Mouse
Purification:	>95%, Protein G purified

Target Details

Target:	PER3
Alternative Name:	PER3 (PER3 Products)
Background:	Background: Originally described as a core component of the circadian clock. The circadian clock, an internal time-keeping system, regulates various physiological processes through the

generation of approximately 24 hour circadian rhythms in gene expression, which are translated into rhythms in metabolism and behavior. It is derived from the Latin roots \\\'circa\\\' (about) and \\\'diem\\\' (day) and acts as an important regulator of a wide array of physiological functions including metabolism, sleep, body temperature, blood pressure, endocrine, immune, cardiovascular, and renal function. Consists of two major components: the central clock, residing in the suprachiasmatic nucleus (SCN) of the brain, and the peripheral clocks that are present in nearly every tissue and organ system. Both the central and peripheral clocks can be reset by environmental cues, also known as Zeitgebers (German for \\\'timegivers\\\'). The predominant Zeitgeber for the central clock is light, which is sensed by retina and signals directly to the SCN. The central clock entrains the peripheral clocks through neuronal and hormonal signals, body temperature and feeding-related cues, aligning all clocks with the external light/dark cycle. Circadian rhythms allow an organism to achieve temporal homeostasis with its environment at the molecular level by regulating gene expression to create a peak of protein expression once every 24 hours to control when a particular physiological process is most active with respect to the solar day. Transcription and translation of core clock components (CLOCK, NPAS2, ARNTL/BMAL1, ARNTL2/BMAL2, PER1, PER2, PER3, CRY1 and CRY2) plays a critical role in rhythm generation, whereas delays imposed by post-translational modifications (PTMs) are important for determining the period (tau) of the rhythms (tau refers to the period of a rhythm and is the length, in time, of one complete cycle). A diurnal rhythm is synchronized with the day/night cycle, while the ultradian and infradian rhythms have a period shorter and longer than 24 hours, respectively. Disruptions in the circadian rhythms contribute to the pathology of cardiovascular diseases, cancer, metabolic syndromes and aging. A transcription/translation feedback loop (TTFL) forms the core of the molecular circadian clock mechanism. Transcription factors, CLOCK or NPAS2 and ARNTL/BMAL1 or ARNTL2/BMAL2, form the positive limb of the feedback loop, act in the form of a heterodimer and activate the transcription of core clock genes and clock-controlled genes (involved in key metabolic processes), harboring E-box elements (5\\\'-CACGTG-3\\\') within their promoters. The core clock genes: PER1/2/3 and CRY1/2 which are transcriptional repressors form the negative limb of the feedback loop and interact with the CLOCK|NPAS2-ARNTL/BMAL1|ARNTL2/BMAL2 heterodimer inhibiting its activity and thereby negatively regulating their own expression. This heterodimer also activates nuclear receptors NR1D1, NR1D2, RORA, RORB and RORG, which form a second feedback loop and which activate and repress ARNTL/BMAL1 transcription, respectively. Has a redundant role with the other PER proteins PER1 and PER2 and is not essential for the circadian rhythms maintenance. In contrast, plays an important role in sleep-wake timing and sleep homeostasis probably through the transcriptional regulation of sleep homeostasis-related genes, without influencing circadian

Target Details

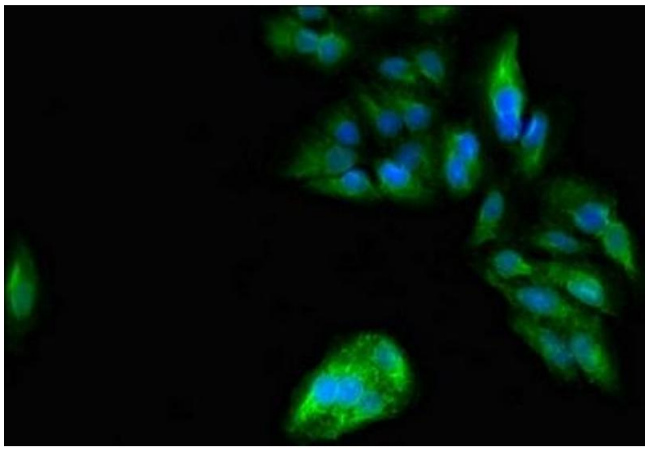
	parameters. Can bind heme. Aliases: 2810049O06Rik antibody, Cell growth inhibiting gene 13 protein antibody, Cell growth-inhibiting gene 13 protein antibody, Circadian clock protein PERIOD 3 antibody, GIG13 antibody, gPER3 antibody, Growth inhibiting protein 13 antibody, HGNC:8847 antibody, hPER3 antibody, mPer3 antibody, Per3 antibody, PER3_HUMAN antibody, Period 3 antibody, Period circadian clock 3 antibody, Period circadian protein 3 antibody, Period circadian protein homolog 3 antibody, Period homolog 3 (Drosophila) antibody, Period homolog 3 antibody, Period homolog 3, Drosophila antibody, Period3 antibody
UniProt:	P56645

Application Details

Application Notes:	Recommended dilution: WB:1:500-1:5000, IHC:1:20-1:200, IF:1:50-1:200,
Restrictions:	For Research Use only

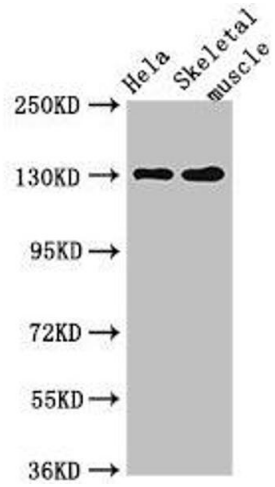
Handling

Format:	Liquid
Buffer:	Preservative: 0.03 % Proclin 300 Constituents: 50 % Glycerol, 0.01M PBS, pH 7.4
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C,-80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.



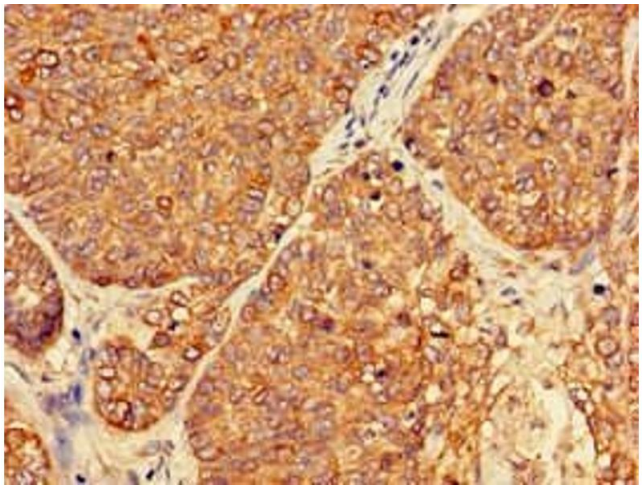
Immunofluorescence

Image 1. Immunofluorescent analysis of Hela cells using ABIN7162911 at dilution of 1:100 and Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG(H+L)



Western Blotting

Image 2. Western Blot Positive WB detected in: Hela whole cell lysate, Mouse skeletal muscle tissue All lanes: PER3 antibody at 4 µg/mL Secondary Goat polyclonal to rabbit IgG at 1/50000 dilution Predicted band size: 132, 133 kDa Observed band size: 132 kDa



Immunohistochemistry

Image 3. Immunohistochemistry of paraffin-embedded human ovarian cancer using ABIN7162911 at dilution of 1:100

Please check the product details page for more images. Overall 4 images are available for ABIN7162911.