

Rabbit PER1 Polyclonal Antibody | anti-PER1 antibody

Anti-PER1 Picoband antibody

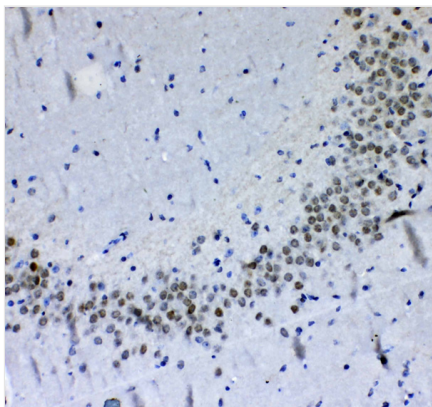
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA124597	Rabbit	Human, Mouse, Rat No cross reactivity with other proteins.	Western Blot, Immunohistochemistry, ELISA

PRODUCT SYNONYMS

PER1; Polyclonal Antibody; Anti-PER1 Picoband antibody; Period circadian protein homolog 1; hPER1; Circadian clock protein PERIOD 1; Circadian pacemaker protein Rigiui; KIAA0482; PER; RIGUI; anti-PER1 antibody

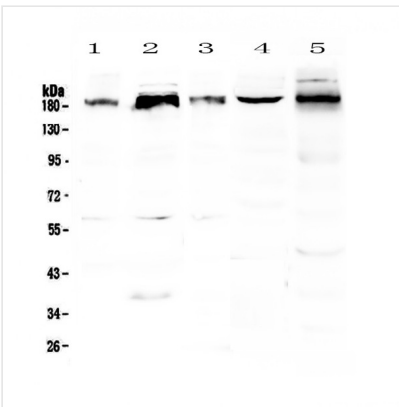
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat No cross reactivity with other proteins.
Clonality	Polyclonal
Form/Format	Lyophilized
Sequence Length	â€
Applicable Applications for anti-PER1 antibody	WB (Western Blot), IHC (Immunohistochemistry), ELISA
Immunogen	E Coli-derived human PER1 recombinant protein (Position: D1119-M1200).
Subcellular Localization	Nucleus. Cytoplasm. Nucleocytoplasmic shuttling is effected by interaction with other circadian core oscillator proteins and/or by phosphorylation. Retention of PER1 in the cytoplasm occurs through PER1-PER2 heterodimer formation. Translocate to the nucleus after phosphorylation by CSNK1D or CSNK1E. Also translocated to the nucleus by CRY1 or CRY2 (By similarity).
Tissue Specificity	Widely expressed. Expressed in hair follicles (at protein level).Found in heart, brain, placenta, lung, liver, skeletal muscle, pancreas, kidney, spleen, thymus, prostate, testis, ovary and small intestine. Highest level in skeletal muscle.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of PER1 using anti-PER1 antibody (AAA124597).PER1 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-PER1 Antibody (AAA124597) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 1. Western blot analysis of PER1 using anti-PER1 antibody (AAA124597).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human PANC cell lysate,Lane 2: human MCF-7 cell lysate,Lane 3: human COLO-320 cell lysate,Lane 4: rat heart tissue lysate,Lane 5: mouse brain tissue lysate.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PER1 antigen affinity purified polyclonal antibody at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for PER1 at approximately 200KD. The expected band size for PER1 is at 136KD.

ADDITIONAL INFORMATION

Related Product Information for anti-PER1 antibody

Description: The PER1 gene encodes the period circadian protein homolog 1 protein in humans. This gene is a member of the Period family of genes and is expressed in a circadian pattern in the suprachiasmatic nucleus, the primary circadian pacemaker in the mammalian brain. Genes in this family encode components of the circadian rhythms of locomotor activity, metabolism, and behavior. This gene is upregulated by CLOCK/ARNTL heterodimers but then represses this upregulation in a feedback loop using PER/CRY heterodimers to interact with CLOCK/ARNTL. Polymorphisms in this gene may increase the risk of getting certain cancers. Alternative splicing has been observed in this gene; however, these variants have not been fully described.

Protein Function: Transcriptional repressor which forms 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

NCBI AND UNIPROT INFORMATION

NCBI GI #	194097341
NCBI GeneID	5187
NCBI Accession #	NP_002607.2
NCBI GenBank Nucleotide #	NM_002616.2
UniProt Accession #	O15534; B2RPA8; B4DI49; D3DTR3
Molecular Weight	â€“ Da
NCBI Official Full Name	period circadian protein homolog 1
NCBI Official Synonym Full Names	period circadian regulator 1
NCBI Official Symbol	PER1
NCBI Official Synonym Symbols	PER; hPER; RIGUI
NCBI Protein Information	period circadian protein homolog 1
UniProt Protein Name	Period circadian protein homolog 1
UniProt Gene Name	PER1
UniProt Synonym Gene Names	KIAA0482; PER; RIGUI; hPER1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/per1-antibody-western-blot-immunohistochemistry-elisa/124597>