Datasheet for ABIN7554935

PER3 Protein (AA 1-1201) (His tag)

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Overview

Quantity:	1 mg
Target:	PER3
Protein Characteristics:	AA 1-1201
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PER3 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat PER3 Protein expressed in mammalien cells.
Sequence:	MPRGEAPGPG RRGAKDEALG EESGERWSPE FHLQRKLADS SHSEQQDRNR VSEELIMVVQ EMKKYFPSER RNKPSTLDAL NYALRCVHSV QANSEFFQIL SQNGAPQADV SMYSLEELAT IASEHTSKNT DTFVAVFSFL SGRLVHISEQ AALILNRKKD VLASSHFVDL LAPQDMRVFY AHTARAQLPF WNNWTQRAAR YECAPVKPFF CRIRGGEDRK QEKCHSPFRI IPYLIHVHHP AQPELESEPC CLTVVEKIHS GYEAPRIPVN KRIFTTTHTP GCVFLEVDEK AVPLLGYLPQ DLIGTSILSY LHPEDRSLMV AIHQKVLKYA GHPPFEHSPI RFCTQNGDYI ILDSSWSSFV NPWSRKISFI IGRHKVRTSP LNEDVFATKI KKMNDNDKDI TELQEQIYKL LLQPVHVSVS SGYGSLGSSG SQEQLVSIAS SSEASGHRVE ETKAEQMTLQ QVYASVNKIK NLGQQLYIES MTKSSFKPVT GTRTEPNGGG ECKTFTSFHQ TLKNNSVYTE PCEDLRNDEH SPSYQQINCI DSVIRYLKSY NIPALKRKCI SCTNTTSSSS EEDKQNHKAD DVQALQAGLQ IPAIPKSEMP TNGRSIDTGG GAPQILSTAM LSLGSGISQC GYSSTIVHVP PPETARDATL FCEPWTLNMQ

Product Details

	PAPLTSEEFK HVGLTAAVLS AHTQKEEQNY VDKFREKILS SPYSSYLQQE SRSKAKYSYF QGDSTSKQTR SAGCRKGKHK RKKLPEPPDS SSSNTGSGPR RGAHQNAQPC CPSAASSPHT SSPTFPPAAM VPSQAPYLVP AFPLPAATSP GREYAAPGTA PEGLHGLPLS EGLQPYPAFP FPYLDTFMTV FLPDPPVCPL LSPSFLPCPF LGATASSAIS PSMSSAMSPT LDPPPSVTSQ RREEEKWEAQ SEGHPFITSR SSSPLQLNLL QEEMPRPSES PDQMRRNTCP QTEYCVTGNN GSESSPATTG ALSTGSPPRE NPSHPTASAL STGSPPMKNP SHPTASALST GSPPMKNPSH PTASTLSMGL PPSRTPSHPT ATVLSTGSPP SESPSRTGSA ASGSSDSSIY LTSSVYSSKI SQNGQQSQDV QKKETFPNVA EEPIWRMIRQ TPERILMTYQ VPERVKEVVL KEDLEKLESM RQQQPQFSHG QKEELAKVYN WIQSQTVTQE IDIQACVTCE NEDSADGAAT SCGQVLVEDS C **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	PER3
Alternative Name:	PER3 (PER3 Products)
Background:	Period circadian protein homolog 3 (hPER3) (Cell growth-inhibiting gene 13 protein) (Circadian

clock protein PERIOD 3),FUNCTION: 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, BMAL1, 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 BMAL1 or 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-BMAL1|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 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

Target Details

	transcriptional regulation of sleep homeostasis-related genes, without influencing circadian parameters. Can bind heme. {ECO:0000269|PubMed:17346965, ECO:0000269|PubMed:19716732, ECO:0000269|PubMed:24439663, ECO:0000269|PubMed:24577121, ECO:0000269|PubMed:26903630}.
Molecular Weight:	131.9 kDa
UniProt:	P56645

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months