PER2 Peptide - Middle Region Blocking Peptide

PRODUCT OVERVIEW

Product Name	PER2, Blocking Peptide
Full Product Name	PER2 Peptide - middle region
Product Gene Name	PER2 blocking peptide
Product Synonym Gene Name	FASPS; KIAA0347
Form/Format	Lyophilized powder
Preparation and Storage	Add 100ul of sterile PBS. Final peptide concentration is 1 mg/ml in PBS. For longer periods of storage, store at -20 degree C. Avoid repeat freeze-thaw cycles.
Antibody/Peptide Pairs	PER2 peptide (MBS3229668) is used for blocking the activity of PER2 antibody (MBS3204702)
Molecular Weight	136kDa
OMIM	603426
Product Categories/Family for PER2 blocking peptide	Peptide
Applications Tested/Suitable for PER2 blocking peptide	Western Blot (WB)
Related Product Information for PER2 blocking peptide	This is a synthetic peptide designed for use in combination with anti-PER2 antibody made Target Description: 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. Circadian expression in the suprachiasmatic nucleus continues in constant darkness, and a shift in the light/dark cycle evokes a proportional shift of gene expression in the suprachiasmatic nucleus. The specific function of this gene is not yet known.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. Circadian expression in the suprachiasmatic nucleus continues in constant darkness, and a shift in the light/dark cycle evokes a proportional shift of gene expression in the suprachiasmatic nucleus. The specific function of this gene is not yet known. Publication Note: This RefSeq record includes a subset of the publications that are available for this gene. Please see the Entrez Gene record to access additional publications.
Other Notes	Small volumes of PER2 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PER2 purchase	MBS3229668 is a blocking peptide targeting PER2. Also known as PER2 Peptide - middle region.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PER2. It may not necessarily be applicable to this product.

NCBI GI #	12707562
NCBI GeneID	8864
NCBI Accession #	NP_073728
UniProt Primary Accession #	O15055
UniProt Related Accession #	O15055

GenBank Nucleotide #	NM_022817
NCBI Official Full Name	period circadian protein homolog 2
NCBI Official Synonym Full Names	period circadian regulator 2
NCBI Official Symbol	PER2
NCBI Official Synonym Symbols	FASPS; FASPS1
UniProt Protein Name	Period circadian protein homolog 2
UniProt Synonym Protein Names	Circadian clock protein PERIOD 2
Protein Family	Period circadian protein
UniProt Gene Name	PER2
UniProt Synonym Gene Names	KIAA0347; hPER2
UniProt Entry Name	PER2_HUMAN
NCBI Protein Information	period circadian protein homolog 2
NCBI Summary for PER2	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 and have been linked to sleep disorders. [provided by RefSeq, Jan 2014]
UniProt Comments for PER2	PER2: a transcription factor belonging to the basic helix-loop-helix (bHLH) family. 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. Circadian expression in the suprachiasmatic nucleus continues in constant darkness, and a shift in the light/dark cycle evokes a proportional shift of gene expression in the suprachiasmatic nucleus. Behaves as a negative element in circadian transcriptional loop. Does not appear to bind DNA, suggesting indirect transcriptional inhibition. Expression oscillates with a 24 hr rhythm in the suprachiasmatic nucleus and the whole eyes. Oscillations are maintained under constant darkness and are responsive to changes of the light/dark cycles. There is a 4 hour time delay between per1 and per2 oscillations. The expression rhythms appear to originate from retina. Protein type: Nucleolus; Transcription factor; Nuclear receptor co-regulator Chromosomal Location of Human Ortholog: 2q37.3 Cellular Component: nucleoplasm; perinuclear region of cytoplasm; cytoplasm; nucleolus; nucleus Molecular Function: ubiquitin binding; signal transducer activity; protein binding; histone deacetylase binding; transcription coactivator activity; kinase binding; nuclear hormone receptor binding Biological Process: circadian rhythm; glycogen biosynthetic process; transcription, DNA-dependent; regulation of cell cycle; negative regulation of transcription from RNA polymerase II promoter; fatty acid metabolic process; regulation of circadian rhythm; signal transduction; regulation of glutamate uptake during transmission of nerve impulse; gluconeogenesis; regulation of neurogenesis; regulation of vasoconstriction; white fat cell differentiation; lactate biosynthetic process; negative regulation of protein ubiquitination; negative regulation of circadian rhythm; circadian regulation of gene expression; negative regulation of transcription, DNA-dependent; regulation of insulin secretion Disease: Advanced Sleep Phase Syndrome, Familial, 1
Research Articles on PER2	**1.** These results indicate that the loss of Per2 is one of the factors underlying tumourigenesis in nonsmall cell lung cancer , and it may function as a novel molecular target for nonsmall cell lung cancer .

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