Per2 (Phospho Ser662) Rabbit pAb

CatalogNo: YP0764 Orthogonal Validated

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse

Applications
- WB,IHC,IF,ELISA

MW
- 120kD (Observed)

Isotype
- IgG

Recommended Dilution Ratios

WB 1:500-1:2000
IHC 1:100-1:300
ELISA 1:5000
IF 1:50-200

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human Period Circadian Protein 2 around the phosphorylation site of Ser662. AA range:636-685

Specificity	Phospho-Per2 (S662) Polyclonal Antibody detects endogenous levels of Per2 protein only when phosphorylated at S662.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):AEsVA

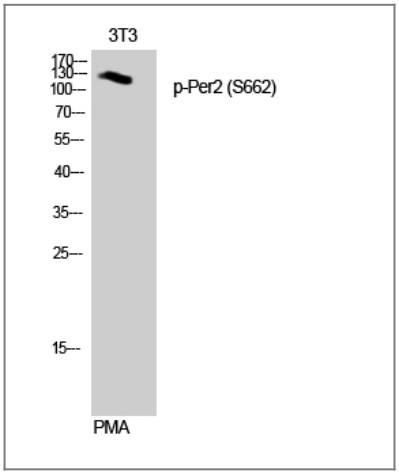
Target Information

Gene name	PER2
Protein Name	Period circadian protein homolog 2

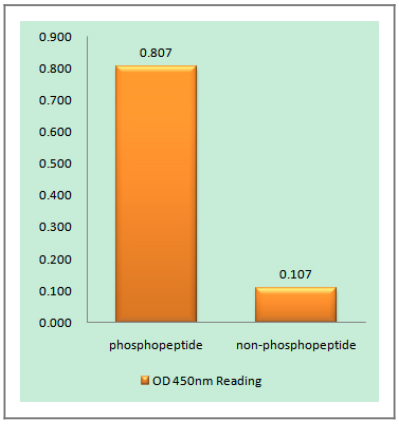
Organism	Gene ID	UniProt ID
Human	8864;	O15055;
Mouse	18627;	O54943;

Cellular Localization	[Isoform 1]: Nucleus . Cytoplasm . Cytoplasm, perinuclear region . Nucleocytoplasmic shuttling is effected by interaction with other circadian core oscillator proteins and/or by phosphorylation. Translocate to the nucleus after phosphorylation by CSNK1D or CSNK1E. Also translocated to the nucleus by CRY1 or CRY2. PML regulates its nuclear localization. .; [Isoform 2]: Nucleus, nucleolus .
Tissue specificity	Widely expressed. Found in heart, brain, placenta, lung, liver, skeleatal muscle, kidney and pancreas. High levels in skeletal muscle and pancreas. Low levels in lung. Isoform 2 is expressed in keratinocytes (at protein level).
Function	Disease:Defects in PER2 are a cause of familial advanced sleep-phase syndrome (FASPS) [MIM:604348]. FASPS is characterized by very early sleep onset and offset. Individuals are 'morning larks' with a 4 hours advance of the sleep, temperature and melatonin rhythms.,Function:Component of the circadian clock mechanism which is essential for generating circadian rhythms. Negative element in the circadian transcriptional loop. Influences clock function by interacting with other circadian regulatory proteins and transporting them to the nucleus. Negatively regulates CLOCK|NPAS2-BMAL1|BMAL2-induced transactivation.,induction:Serum-induced levels in fibroblasts show circadian oscillations. Maximum levels after 1 hour stimulation, minimum levels after 12 hours. Another peak is then observed after 24 hours.,PTM:Phosphorylated by CSNK1E and CSNK1D. Phosphorylation results in PER2 protein degradation.,similarity:Contains 1 PAC (PAS-associated C-terminal) domain.,similarity:Contains 2 PAS (PER-ARNT-SIM) domains.,subcellular location:Mainly nuclear. 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 or by interaction with CSNK1E and/or phosphorylation which appears to mask the PER nuclear localization signal. Also translocated to the nucleus by CRY1 or CRY2.,subunit:Component of the circadian core oscillator, which includes the CRY proteins, CLOCK or NPAS2, BMAL1 or BMAL2, CSNK1D and/or CSNK1E, TIMELESS, and the PER proteins. Interacts directly with PER1 and PER3, and through a C-terminal domain, with CRY1 and CRY2. Interaction with CSNK1D or CSNK1E promotes nuclear location of PER proteins. Interacts, via its second PAS domain, with TIMELESS in vitro. Interacts with NFIL3.,tissue specificity:Widely expressed. Found in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. High levels in skeletal muscle and pancreas. Low level in lung.,

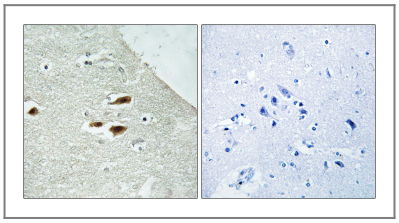
Validation Data



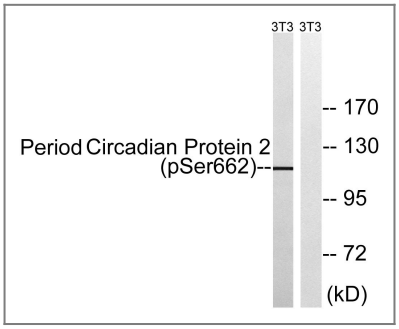
Western Blot analysis of 3T3 cells using Phospho-Per2 (S662) Polyclonal Antibody diluted at 1:500



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Period Circadian Protein 2 (Phospho-Ser662) Antibody



Immunohistochemistry analysis of paraffin-embedded human brain, using Period Circadian Protein 2 (Phospho-Ser662) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from NIH/3T3 cells treated with PMA 125ng/ml 30', using Period Circadian Protein 2 (Phospho-Ser662) Antibody. The lane on the right is blocked with the phospho peptide.

Contact information

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Please scan the QR code to access additional product information:
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