



# Per2 Polyclonal Antibody

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>                  | YP-Ab-01937                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Reactivity</b>                  | Human;Mouse                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Applications</b>                | IHC;IF;ELISA                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Gene Name</b>                   | PER2                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Immunogen</b>                   | The antiserum was produced against synthesized peptide derived from human Period Circadian Protein 2. AA range:636-685                                                                                                                                                                                                                                                                                  |
| <b>Specificity</b>                 | Per2 Polyclonal Antibody detects endogenous levels of Per2 protein.                                                                                                                                                                                                                                                                                                                                     |
| <b>Formulation</b>                 | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>                      | Polyclonal, Rabbit,IgG                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Purification</b>                | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.                                                                                                                                                                                                                                                                                   |
| <b>Dilution</b>                    | Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications.                                                                                                                                                                                                                                                                           |
| <b>Concentration</b>               | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Storage Stability</b>           | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Synonyms</b>                    | FASPS;hPER2;KIAA0347;PER2;period homolog 2 (Drosophila);Period circadian protein homolog 2;Circadian clock protein PERIOD 2                                                                                                                                                                                                                                                                             |
| <b>Observed Band</b>               |                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Calculated Molecular Weight</b> |                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Cell Pathway</b>                | [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 . |
| <b>Tissue Specificity</b>          | Widely expressed. Found in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. High levels in skeletal muscle and pancreas. Low levels in lung. Isoform 2 is expressed in keratinocytes (at protein level).                                                                                                                                                                      |
| <b>Function</b>                    | 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 degradatio

#### Background

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],

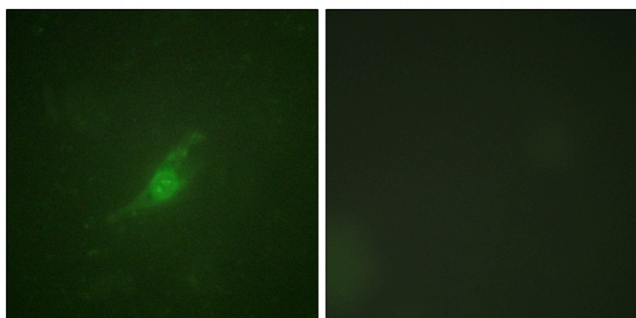
#### matters needing attention

Avoid repeated freezing and thawing!

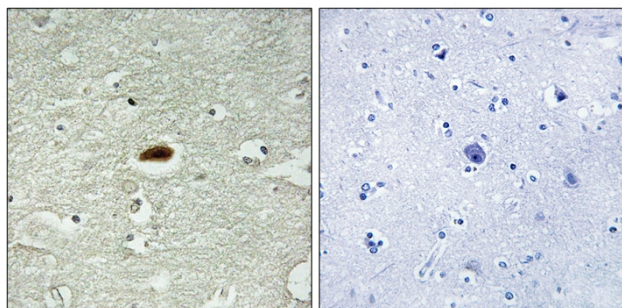
#### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

### Products Images



Immunofluorescence analysis of NIH/3T3 cells, using Period Circadian Protein 2 Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human brain tissue, using Period Circadian Protein 2 Antibody. The picture on the right is blocked with the synthesized peptide.