SunLong Biotech Co.,LTD
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**[ Primary Antibody ]**

# Rabbit Anti-Cryptochrome 1 antibody

**Catalog Number: SL11441R**

**FOR RESEARCH USE ONLY**

**[ DATASHEET ]**

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| **Host:** | Rabbit |
| **Isotype:** | IgG |
| **Clonality:** | Polyclonal |
| **Target:** | Cryptochrome 1 |
| **Immunogen:** | KLH conjugated synthetic peptide derived from human Cryptochrome 1: 251-350/586 |
| **Purification:** | affinity purified by Protein A |
| **Concentration:** | 1mg/ml |
| **Storage:** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. |
| **Applications:** | WB=1:500-2000<br>IHC-P=1:100-500<br>IHC-F=1:100-500<br>IF=1:100-500 （Paraffin sections need antigen repair）<br>not yet tested in other applications.<br>optimal dilutions/concentrations should be determined by the end user. |
| **Reactivity:** | Human,Mouse(predicted:Rat,Chicken,Dog,Pig,Cow,Rabbit,Sheep) |
| **Predicted MW.:** | 64kDa |
| **Subcellular Location:** | The nucleus cytoplasmic |
| **Background:** | Circadian clocks are biological timepieces that regulate hormonal rhythms, sleep cycles and feeding behaviors. These rhythms are generated in the superchiasmatic nucleus (SCN), a cell-autonomous circadian oscillator located within the brain that is synchronized with the environment by light. A number of transcription factors, including Clock and BMAL1, are molecular components of the SCN that induce the expression of proteins involved in light/dark cycle entrainment, which include Per1 and Per2.<br>Tim, for timeless, generates a negative feedback loop that regulates the activity of Clock by suppressing the expression of Clock target genes. Tim forms heterodimers with Per1 and Per2 that bind Clock and block the activation of Clock-BMAL1 dimers to repress Per gene expression. Additionally, the CRY |

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| | proteins, which are cryptochrome photoreceptors for the circadian clock, function as light-independent inhibitors of the circadian clock.<br>CRY1 and CRY2 negatively regulate SCN components by associating with the activators Clock-BMAL1, and also with the various feedback inhibitors Per1, Per2 and Tim.<br>**Function:** Blue light-dependent regulator of the circadian feedback loop. Inhibits CLOCK NPAS2-ARNTL E box-mediated transcription. Acts, in conjunction with CRY2, in maintaining period length and circadian rhythmicity. Has no photolyase activity. Capable of translocating circadian clock core proteins such as PER proteins to the nucleus. May inhibit CLOCK.<br>**Subunit:** Component of the circadian core oscillator, which includes the CRY proteins, CLOCK or NPAS2, ARNTL or ARNTL2, CSNK1D and/or CSNK1E, TIMELESS, and the PER proteins. Interacts directly with TIMELESS and the PER proteins. Interacts directly with PER1 and PER2 C-terminal domains. Interaction with PER2 inhibits its ubiquitination and vice versa. Binds MAPK. Interacts with FBXL21 (By similarity). Interacts with FBXL3.<br>**Subcellular Location:** Cytoplasm. Nucleus. Translocated to the nucleus through interaction with other Clock proteins such as PER2 or ARNTL.<br>**Post-translational modifications:** Phosphorylation on Ser-247 by MAPK is important for the inhibition of CLOCK-ARNTL-mediated transcriptional activity. Phosphorylation by CSNK1E requires interaction with PER1 or PER2. Phosphorylation at Ser-71 and Ser-280 by AMPK destabilizes it. Ubiquitinated by the SCF(FBXL3) and SCF(FBXL21) complex leading to degradation.<br>**Similarity:** Belongs to the DNA photolyase class-1 family.<br>Contains 1 DNA photolyase domain.<br>**Database links:**<br>**Entrez Gene:** 1407 Human<br>Omim: 601933 Human<br>**SwissProt:** Q16526 Human<br>**Unigene:** 151573 Human |

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## [ VALIDATION IMAGES ]

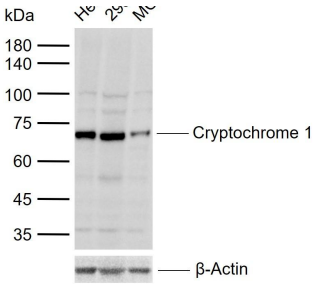



Figure 1. Sample: Lane 1: Human HeLa cell lysates Lane 2: Human 293T cell lysates Lane 3: Human MCF-7 cell lysates Primary: Anti-Cryptochrome 1 (SL11441R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 64 kDa Observed band size: 70 kDa

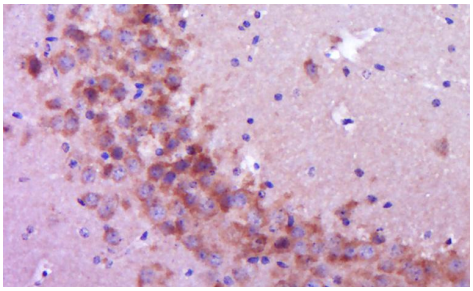


Figure 2. Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Cryptochrome 1) Polyclonal Antibody, Unconjugated (SL11441R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

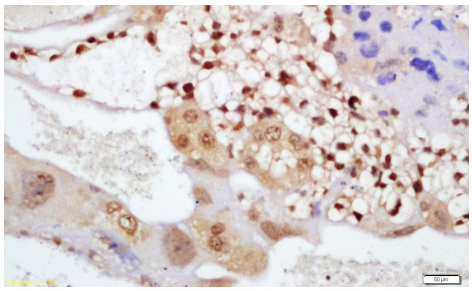


Figure 3. Tissue/cell: mouse placenta tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min; Incubation: Anti-Cryptochrome-1 Polyclonal Antibody, Unconjugated(SL11441R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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