



Rabbit Anti-CRY2 antibody

SL11447R

Product Name:	CRY2
Chinese Name:	隐花色素蛋白2抗体
Alias:	cry2; CRY2_HUMAN; cryptochrome 2 (photolyase like); Cryptochrome2; Cryptochrome 2; Cryptochrome-2; FLJ10332; growth inhibiting protein 37; HCRY2; KIAA0658; PHL2; Photolyase like.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	65kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Cryptochrome 2:241-340/593
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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. 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 proteins, which are cryptochrome photoreceptors for the circadian clock, function as light-independent inhibitors of the circadian clock. 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.

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 NPAS2-ARNTL transcriptional activity through stabilizing the unphosphorylated form of ARNTL.

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 PER1 and PER2 C-terminal domains. Interaction with PER2 inhibits its ubiquitination and vice versa. Interacts with NFIL3. Interacts with FBXL3.

Subcellular Location:

Cytoplasm. Nucleus. Translocated to the nucleus through interaction with other Clock proteins such as PER2 or ARNTL.

Tissue Specificity:

Expressed in all tissues examined including fetal brain, fibroblasts, heart, brain, placenta, lung, liver, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, testis, ovary, small intestine, colon and leukocytes. Highest levels in heart and skeletal muscle.

Post-translational modifications:

Phosphorylation on Ser-266 by MAPK is important for the inhibition of CLOCK-ARNTL-mediated transcriptional activity. Phosphorylation by CSKNE requires interaction with PER1 or PER2.

Ubiquitinated by the SCF(FBXL3) and SCF(FBXL21) complex, leading to its degradation.

Similarity:

Belongs to the DNA photolyase class-1 family.
Contains 1 DNA photolyase domain.

SWISS:

Q49AN0

Gene ID:
1408

Database links:

[Entrez Gene: 1408](#) Human

[Entrez Gene: 12953](#) Mouse

[Omim: 603732](#) Human

[SwissProt: Q49AN0](#) Human

[SwissProt: Q9R194](#) Mouse

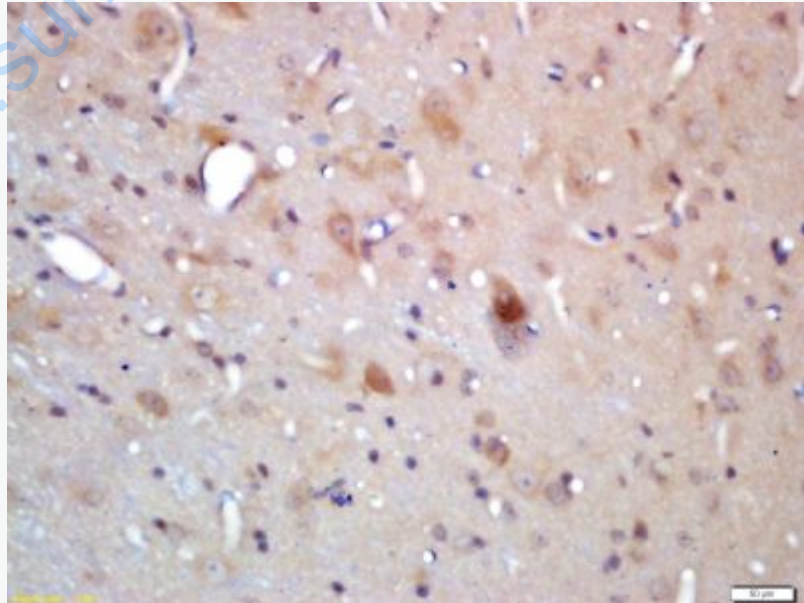
[Unigene: 532491](#) Human

[Unigene: 254181](#) Mouse

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Tissue/cell: rat brain 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°C for 20 min;

Incubation: Anti-CRY2 Polyclonal Antibody, Unconjugated(SL11447R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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