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NOCT Rabbit pAb

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Catalog # AP54504

Product Information

Application	WB, E
Primary Accession	Q9UK39
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	48196
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Nocturnin
Epitope Specificity	91-190/431
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the CCR4/nocturin family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Nocturnin is a 431 amino acid circadian deadenylase protein that is expressed in a broad range of tissues with greatest abundance in the liver, kidney and testis. Nocturnin plays a role in circadian regulation as well as diet-induced obesity. The mRNA abundance of Nocturnin exhibits circadian rhythmicity, peaking after dusk in photoreceptors, spleen, heart, kidney and liver. Nocturnin is thought to be responisble for turning off genes that are involved in circadian regulation. In Xenopus retinal photoreceptor cells, the rhythmic regulation of Nocturnin is thought to be controlled by phosphorylated CREB. Mice lacking Nocturnin remain lean on high fat diets with a reduction in visceral fat, which suggests that this protein may also be responsible for lipid metabolism and fat storage.

Additional Information

Gene ID	25819
Other Names	Nocturnin {ECO:0000312|HGNC:HGNC:14254}, 3.1.3.108, Carbon catabolite repression 4-like protein, NOCT (HGNC:14254), CCR4, CCRN4L, NOC
Dilution	WB=1:500-2000,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

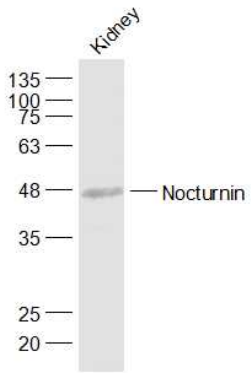
Protein Information

Name	NOCT (HGNC:14254)
Synonyms	CCR4, CCRN4L, NOC
Function	Phosphatase which catalyzes the conversion of NADP(+) to NAD(+) and of NADPH to NADH (PubMed:31147539). Shows a small preference for NADPH over NADP(+) (PubMed:31147539). Represses translation and promotes degradation of target mRNA molecules (PubMed:29860338). Plays an important role in post-transcriptional regulation of metabolic genes under circadian control (By similarity). Exerts a rhythmic post- transcriptional control of genes necessary for metabolic functions including nutrient absorption, glucose/insulin sensitivity, lipid metabolism, adipogenesis, inflammation and osteogenesis (By similarity). Plays an important role in favoring adipogenesis over osteoblastogenesis and acts as a key regulator of the adipogenesis/osteogenesis balance (By similarity). Promotes adipogenesis by facilitating PPARG nuclear translocation which activates its transcriptional activity (By similarity). Regulates circadian expression of NOS2 in the liver and negatively regulates the circadian expression of IGF1 in the bone (By similarity). Critical for proper development of early embryos (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:O35710}. Nucleus {ECO:0000250|UniProtKB:O35710}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:O35710}. Mitochondrion
Tissue Location	Adipose tissue. Expression is higher in subcutaneous adipose tissue as compared to visceral adipose tissue

Background

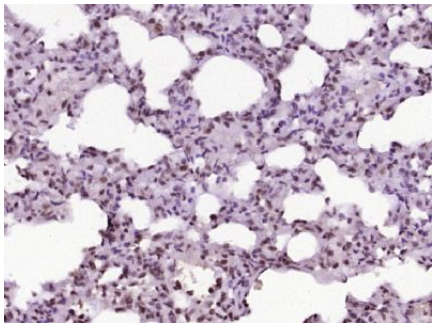
Nocturnin is a 431 amino acid circadian deadenylase protein that is expressed in a broad range of tissues with greatest abundance in the liver, kidney and testis. Nocturnin plays a role in circadian regulation as well as diet-induced obesity. The mRNA abundance of Nocturnin exhibits circadian rhythmicity, peaking after dusk in photoreceptors, spleen, heart, kidney and liver. Nocturnin is thought to be responisble for turning off genes that are involved in circadian regulation. In Xenopus retinal photoreceptor cells, the rhythmic regulation of Nocturnin is thought to be controlled by phosphorylated CREB. Mice lacking Nocturnin remain lean on high fat diets with a reduction in visceral fat, which suggests that this protein may also be responsible for lipid metabolism and fat storage.

Images

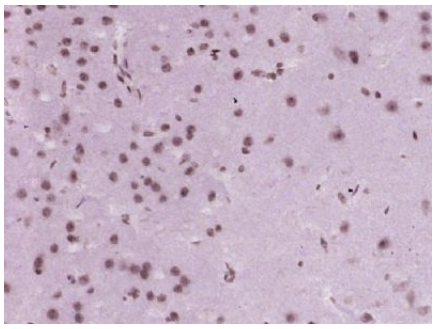


Sample:
Kidney (Mouse) Lysate at 40 ug
Primary: Anti-Nocturnin (AP54504) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 48 kD
Observed band size: 48 kD

Paraformaldehyde-fixed, paraffin embedded (Rat lung); 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 (Nocturnin) Polyclonal Antibody, Unconjugated (AP54504) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



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 (Nocturnin) Polyclonal Antibody, Unconjugated (AP54504) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.