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NR1D2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14855c

Product Information

Application	IHC-P, WB, E
Primary Accession	Q14995
Other Accession	NP_005117.3
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	64643
Antigen Region	266-294

Additional Information

Gene ID	9975
Other Names	Nuclear receptor subfamily 1 group D member 2, Orphan nuclear hormone receptor BD73, Rev-erb alpha-related receptor, RVR, Rev-erb-beta, V-erbA-related protein 1-related, EAR-1R, NR1D2
Target/Specificity	This NR1D2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 266-294 amino acids from the Central region of human NR1D2.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NR1D2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NR1D2 (HGNC:7963)
Function	Transcriptional repressor which coordinates circadian rhythm and metabolic pathways in a heme-dependent manner. Integral component of the complex transcription machinery that governs circadian rhythmicity and

	forms a critical negative limb of the circadian clock by directly repressing the expression of core clock components BMAL1 and CLOCK. Also regulates genes involved in metabolic functions, including lipid metabolism and the inflammatory response. Acts as a receptor for heme which stimulates its interaction with the NCOR1/HDAC3 corepressor complex, enhancing transcriptional repression. Recognizes two classes of DNA response elements within the promoter of its target genes and can bind to DNA as either monomers or homodimers, depending on the nature of the response element. Binds as a monomer to a response element composed of the consensus half-site motif 5'-[A/G]GGTCA-3' preceded by an A/T-rich 5' sequence (RevRE), or as a homodimer to a direct repeat of the core motif spaced by two nuclegotides (RevDR-2). Acts as a potent competitive repressor of ROR alpha (RORA) function and also negatively regulates the expression of NR1D1. Regulates lipid and energy homeostasis in the skeletal muscle via repression of genes involved in lipid metabolism and myogenesis including: CD36, FABP3, FABP4, UCP3, SCD1 and MSTN. Regulates hepatic lipid metabolism via the repression of APOC3. Represses gene expression at a distance in macrophages by inhibiting the transcription of enhancer-derived RNAs (eRNAs). In addition to its activity as a repressor, can also act as a transcriptional activator. Acts as a transcriptional activator of the sterol regulatory element-binding protein 1 (SREBF1) and the inflammatory mediator interleukin-6 (IL6) in the skeletal muscle (By similarity). Plays a role in the regulation of circadian sleep/wake cycle; essential for maintaining wakefulness during the dark phase or active period (By similarity). Key regulator of skeletal muscle mitochondrial function; negatively regulates the skeletal muscle expression of core clock genes and genes involved in mitochondrial biogenesis, fatty acid beta-oxidation and lipid metabolism (By similarity). May play a role in the circadian control of neutrophilic inflammation in the lung (By similarity).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00407, ECO:0000269|PubMed:17892483, ECO:0000269|PubMed:17996965}. Cytoplasm {ECO:0000250|UniProtKB:Q60674}. Note=Phosphorylation by CSNK1E enhances its cytoplasmic localization. {ECO:0000250|UniProtKB:Q60674}
Tissue Location	Widely expressed. Expressed at high levels in the liver, adipose tissue, skeletal muscle and brain. Expression oscillates diurnally in the suprachiasmatic nucleus (SCN) of the hypothalamus as well as in peripheral tissues

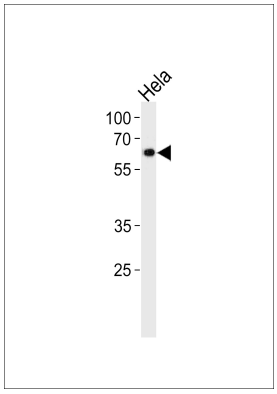
Background

This gene encodes a member of the nuclear hormone receptor family, specifically the NR1 subfamily of receptors. The encoded protein functions as a transcriptional repressor and may play a role in circadian rhythms and carbohydrate and lipid metabolism. Alternatively spliced transcript variants have been described.

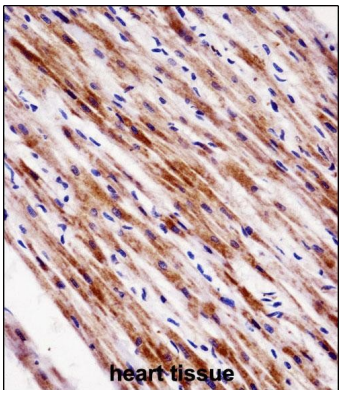
References

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Images



NR1D2 Antibody (Center) (Cat. #AP14855c) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the NR1D2 antibody detected the NR1D2 protein (arrow).



NR1D2 Antibody (Center) (AP14855c)immunohistochemistry analysis in formalin fixed and paraffin embedded human heart tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of NR1D2 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

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