ARG57489
anti-NR1D2 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes NR1D2
Tested Reactivity	Hu
Tested Application	WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	NR1D2
Species	Human
Immunogen	KLH-conjugated synthetic peptide corresponding to aa. 266-294 (Center) of Human NR1D2.
Conjugation	Un-conjugated
Alternate Names	BD73; V-erbA-related protein 1-related; Orphan nuclear hormone receptor BD73; Rev-erb alpha-related receptor; EAR-1R; Rev-erb-beta; RVR; Nuclear receptor subfamily 1 group D member 2

Application Instructions

Application table

Application	Dilution
WB	1:1000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	HeLa

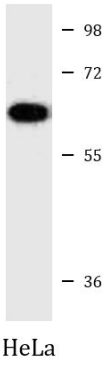
Properties

Form	Liquid
Purification	Purification with Protein A and immunogen peptide.
Buffer	PBS and 0.09% (W/V) Sodium azide.
Preservative	0.09% (W/V) Sodium azide.
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	NR1D2
Gene Full Name	nuclear receptor subfamily 1, group D, member 2
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. [provided by RefSeq, Feb 2009]
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 ARNTL/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. [UniProt]
Calculated Mw	65 kDa
PTM	Deacetylated by HDAC1. Acetylation and deacetylation regulate its transcriptional regulatory activity. Under more reducing intracellular redox conditions, Cys-384 is in its heme-bound state, which is optimal for recruitment of the NCOR1/HDAC3 corepressor complex and repression of target genes. When subjected to oxidative stress conditions, Cys-384 undergoes oxidation to form a disulfide bridge with Cys-374, also triggering a ligand switch that results in release of bound heme and derepression of target genes.
Cellular Localization	Nucleus.

Images



ARG57489 anti-NR1D2 antibody WB image

Western blot: 35 µg of HeLa cell lysate stained with ARG57489 anti-NR1D2 antibody.