Rabbit NR1D1 Polyclonal Antibody | anti-NR1D1 antibody

NR1D1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA323254	**Rabbit**	**Human, Mouse, Rat, Pig, Monkey.**	**Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

NR1D1; Polyclonal Antibody; NR1D1 Antibody; EAR-1; EAR1; ERBA-related 1; hRev; Nr1d1; NR1D1_HUMAN; Nuclear receptor Rev ErbA alpha; Nuclear receptor subfamily 1 group D member 1; Rev erbAalpha; Rev erbalpha; Rev-erbA-alpha; Rev-ErbAalpha; Reverba; THRA1; THRAL; Thyroid hormone receptor; alpha like; alpha-1-like; V-erbA-related protein 1; anti-NR1D1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat, Pig, Monkey.
Clonality	Polyclonal
Isotype	IgG
Specificity	NR1D1 antibody detects endogenous levels of NR1D1.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	614
Applicable Applications for anti-NR1D1 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human URAT1, corresponding to a region within N-terminal amino acids.
Subcellular Location	Nucleus.
Tissue Specificity	Widely expressed. Expressed at high levels in the liver, adipose tissue, skeletal muscle and brain. Also expressed in endothelial cells (ECs), vascular smooth muscle cells (VSMCs) and macrophages. Expression oscillates diurnally in the suprachiasmatic nucleus (SCN) of the hypothalamus as well as in peripheral tissues. Expression increases during the differentiation of pre-adipocytes into mature adipocytes. Expressed at high levels in some squamous carcinoma cell lines.
Conjugation	Unconjugated
Preparation and Storage	Store at -20°C. Stable for 12 months from date of receipt.

IMAGES

WB (Western Blot)
Western blot analysis of extracts of MCF-7 cells, using NR1D1 antibody.

IHC (Immunohistochemistry)
AAA323254 at 1/100 staining Mouse liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-NR1D1 antibody	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 ARTNL/BMAL1, CLOCK and CRY1. Also regulates genes involved in metabolic functions, including lipid and bile acid metabolism, adipogenesis, gluconeogenesis and the macrophage 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 nucleotides (RevDR-2). Acts as a potent competitive repressor of ROR alpha (RORA) function and regulates the levels of its ligand heme by repressing the expression of PPARGC1A, a potent inducer of heme synthesis. Regulates lipid metabolism by repressing the expression of APOC3 and by influencing the activity of sterol response element binding proteins (SREBPs); represses INSIG2 which interferes with the proteolytic activation of SREBPs which in turn govern the rhythmic expression of enzymes with key functions in sterol and fatty acid synthesis. Regulates gluconeogenesis via repression of G6PC and PEPCK and adipocyte differentiation via repression of PPARG. Regulates glucagon release in pancreatic alpha-cells via the AMPK-NAMPT-SIRT1 pathway and the proliferation, glucose-induced insulin secretion and expression of key lipogenic genes in pancreatic-beta cells. Positively regulates bile acid synthesis by increasing hepatic expression of CYP7A1 via repression of NR0B2 and NFIL3 which are negative regulators of CYP7A1. Modulates skeletal muscle oxidative capacity by regulating mitochondrial biogenesis and autophagy; controls mitochondrial biogenesis and respiration by interfering with the STK11-PRKAA1/2-SIRT1-PPARGC1A signaling pathway. Represses the expression of SERPINE1/PAI1, an important modulator of cardiovascular disease and the expression of inflammatory cytokines and chemokines in macrophages. Represses gene expression at a distance in macrophages by inhibiting the transcription of enhancer-derived RNAs (eRNAs). Plays a role in the circadian regulation of body temperature and negatively regulates thermogenic transcriptional programs in brown adipose tissue (BAT); imposes a circadian oscillation in BAT activity, increasing body temperature when awake and depressing thermogenesis during sleep. In concert with NR2E3, regulates transcriptional networks critical for photoreceptor development and function. In addition to its activity as a repressor, can also act as a transcriptional activator. In the ovarian granulosa cells acts as a transcriptional activator of STAR which plays a role in steroid biosynthesis. In collaboration with SP1, activates GJA1 transcription in a heme-independent manner. Subunit Structure: Binds DNA as a monomer or a homodimer. Interacts with C1D, NR2E3 and SP1. Interacts with OPHN1 (via C-terminus). Interacts with ZNHIT1. Interacts with PER2; the interaction associates PER2 to ARNTL promoter region. Interacts with CRY1. Interacts with CCAR2. Post-translational Modifications: Ubiquitinated, leading to its proteasomal degradation. Similarity: Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain. Belongs to the nuclear hormone receptor family. NR1 subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	13430848
NCBI GeneID	9572
NCBI Accession #	NP_068370.1
NCBI GenBank Nucleotide #	NM_021724.4
UniProt Accession #	P20393; Q0P5Z4; Q15304

Molecular Weight	40 kDa, 65-70 kDa
NCBI Official Full Name	nuclear receptor subfamily 1 group D member 1
NCBI Official Synonym Full Names	nuclear receptor subfamily 1 group D member 1
NCBI Official Symbol	NR1D1
NCBI Official Synonym Symbols	EAR1; hRev; THRA1; THRAL; ear-1; REVERBA; REVERBalpha
NCBI Protein Information	nuclear receptor subfamily 1 group D member 1
UniProt Protein Name	Nuclear receptor subfamily 1 group D member 1
UniProt Gene Name	**NR1D1**
UniProt Synonym Gene Names	EAR1; HREV; THRAL; EAR-1

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AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
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