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RORC Antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI16046

Product Information

Application	WB
Primary Accession	P51449
Other Accession	NP_005051
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58195

Additional Information

Gene ID	6097
Alias Symbol	RORC, NR1F3, RORG, RZRG,
Other Names	Nuclear receptor ROR-gamma, Nuclear receptor RZR-gamma, Nuclear receptor subfamily 1 group F member 3, RAR-related orphan receptor C, Retinoid-related orphan receptor-gamma, RORC, NR1F3, RORG, RZRG
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 &mu, l of distilled water. Final Anti-RORC antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles.
Precautions	RORC Antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RORC
Synonyms	NR1F3, RORG, RZRG
Function	Nuclear receptor that binds DNA as a monomer to ROR response elements (RORE) containing a single core motif half-site 5'-AGGTCA-3' preceded by a short A-T-rich sequence. Key regulator of cellular differentiation, immunity, peripheral circadian rhythm as well as lipid, steroid, xenobiotics and glucose metabolism (PubMed:19381306, PubMed:19965867, PubMed:20203100, PubMed:22789990, PubMed:26160376). Considered to have intrinsic transcriptional activity, have some natural ligands like oxysterols that act as agonists (25- hydroxycholesterol) or inverse agonists (7-oxygenated sterols),

	enhancing or repressing the transcriptional activity, respectively (PubMed:19965867, PubMed:22789990). Recruits distinct combinations of cofactors to target gene regulatory regions to modulate their transcriptional expression, depending on the tissue, time and promoter contexts. Regulates the circadian expression of clock genes such as CRY1, BMAL1 and NR1D1 in peripheral tissues and in a tissue-selective manner. Competes with NR1D1 for binding to their shared DNA response element on some clock genes such as BMAL1, CRY1 and NR1D1 itself, resulting in NR1D1-mediated repression or RORC-mediated activation of the expression, leading to the circadian pattern of clock genes expression. Therefore influences the period length and stability of the clock. Involved in the regulation of the rhythmic expression of genes involved in glucose and lipid metabolism, including PLIN2 and AVPR1A (PubMed:19965867). Negative regulator of adipocyte differentiation through the regulation of early phase genes expression, such as MMP3. Controls adipogenesis as well as adipocyte size and modulates insulin sensitivity in obesity. In liver, has specific and redundant functions with RORA as positive or negative modulator of expression of genes encoding phase I and Phase II proteins involved in the metabolism of lipids, steroids and xenobiotics, such as SULT1E1. Also plays a role in the regulation of hepatocyte glucose metabolism through the regulation of G6PC1 and PCK1 (PubMed:19965867). Regulates the rhythmic expression of PROX1 and promotes its nuclear localization (PubMed:19381306, PubMed:19965867, PubMed:20203100, PubMed:22789990, PubMed:26160376). Plays an indispensable role in the induction of IFN-gamma dependent anti-mycobacterial systemic immunity (PubMed:26160376).
Cellular Location	Nucleus.
Tissue Location	Isoform 1 is widely expressed in many tissues, including liver and adipose, and highly expressed in skeletal muscle Isoform 2 is primarily expressed in immature thymocytes

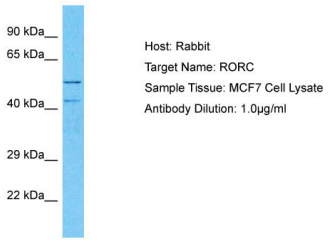
Background

Nuclear receptor that binds DNA as a monomer to ROR response elements (RORE) containing a single core motif half-site 5'-AGGTCA-3' preceded by a short A-T-rich sequence. Key regulator of cellular differentiation, immunity, peripheral circadian rhythm as well as lipid, steroid, xenobiotics and glucose metabolism. Considered to have intrinsic transcriptional activity, have some natural ligands like oxysterols that act as agonists (25- hydroxycholesterol) or inverse agonists (7-oxygenated sterols), enhancing or repressing the transcriptional activity, respectively. Recruits distinct combinations of cofactors to target gene regulatory regions to modulate their transcriptional expression, depending on the tissue, time and promoter contexts. Regulates the circadian expression of clock genes such as CRY1, ARNTL/BMAL1 and NR1D1 in peripheral tissues and in a tissue- selective manner. Competes with NR1D1 for binding to their shared DNA response element on some clock genes such as ARNTL/BMAL1, CRY1 and NR1D1 itself, resulting in NR1D1-mediated repression or RORC- mediated activation of the expression, leading to the circadian pattern of clock genes expression. Therefore influences the period length and stability of the clock. Involved in the regulation of the rhythmic expression of genes involved in glucose and lipid metabolism, including PLIN2 and AVPR1A. Negative regulator of adipocyte differentiation through the regulation of early phase genes expression, such as MMP3. Controls adipogenesis as well as adipocyte size and modulates insulin sensitivity in obesity. In liver, has specific and redundant functions with RORA as positive or negative modulator of expression of genes encoding phase I and Phase II proteins involved in the metabolism of lipids, steroids and xenobiotics, such as SULT1E1. Also plays also a role in the regulation of hepatocyte glucose metabolism through the regulation of G6PC and PCK1. Regulates the rhythmic expression of PROX1 and promotes its nuclear localization (By similarity).

References

Hirose T.,et al.Biochem. Biophys. Res. Commun. 205:1976-1983(1994).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Gregory S.G.,et al.Nature 441:315-321(2006).
Jetten A.M.,et al.Nucl. Recept. Signal. 7:3-35(2009).
Wang Y.,et al.Biochim. Biophys. Acta 1801:917-923(2010).

Images



Host: Rabbit
Target Name: RORC
Sample Tissue: MCF7 Whole cell lysate
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Antibody Dilution: 1.0µg/ml

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