

RORC / ROR Gamma Antibody (Ligand-binding Domain)
Rabbit Polyclonal Antibody
Catalog # ALS10814**Specification**

RORC / ROR Gamma Antibody (Ligand-binding Domain) - Product Information

Application	IHC
Primary Accession	P51449
Reactivity	Human, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58kDa KDa

RORC / ROR Gamma Antibody (Ligand-binding Domain) - Additional Information**Gene ID** 6097**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

Target/Specificity

Human ROR Gamma. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage

Long term: -70°C; Short term: +4°C

Precautions

RORC / ROR Gamma Antibody (Ligand-binding Domain) is for research use only and not for use in diagnostic or therapeutic procedures.

RORC / ROR Gamma Antibody (Ligand-binding Domain) - 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](http://www.uniprot.org/citations/19381306), PubMed: [19965867](http://www.uniprot.org/citations/19965867), PubMed: [22789990](http://www.uniprot.org/citations/22789990), PubMed: [26160376](http://www.uniprot.org/citations/26160376), PubMed: [20203100](http://www.uniprot.org/citations/20203100))

target="_blank">20203100). 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:22789990, PubMed:26160376, PubMed:20203100). Plays an indispensable role in the induction of IFN-gamma dependent anti-mycobacterial systemic immunity (PubMed:26160376).

Cellular Location

Nucleus.

Tissue Location

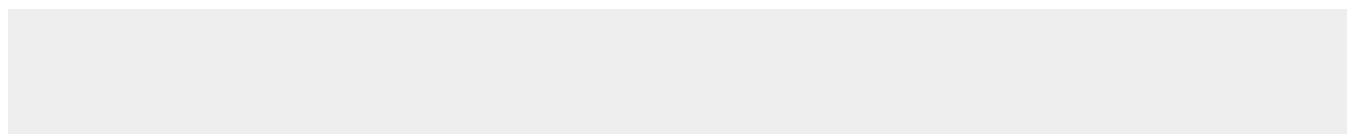
Isoform 1 is widely expressed in many tissues, including liver and adipose, and highly expressed in skeletal muscle Isoform 2 is primarily expressed in immature thymocytes

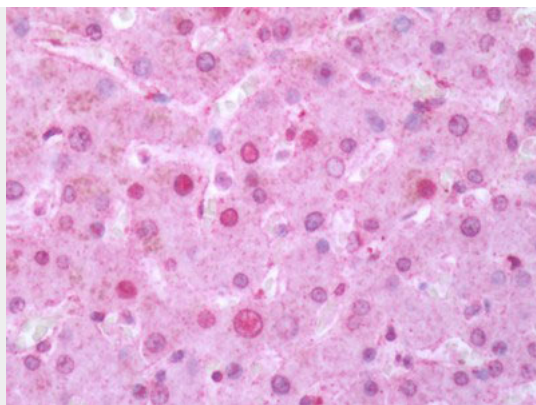
RORC / ROR Gamma Antibody (Ligand-binding Domain) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

RORC / ROR Gamma Antibody (Ligand-binding Domain) - Images





Human Liver: Formalin-Fixed, Paraffin-Embedded (FFPE)

RORC / ROR Gamma Antibody (Ligand-binding Domain) - 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).

RORC / ROR Gamma Antibody (Ligand-binding Domain) - 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).