

## Nuclear receptor ROR-gamma Polyclonal Antibody

Catalog No: #42312

Orders: [order@signalwayantibody.com](mailto:order@signalwayantibody.com)Support: [tech@signalwayantibody.com](mailto:tech@signalwayantibody.com)

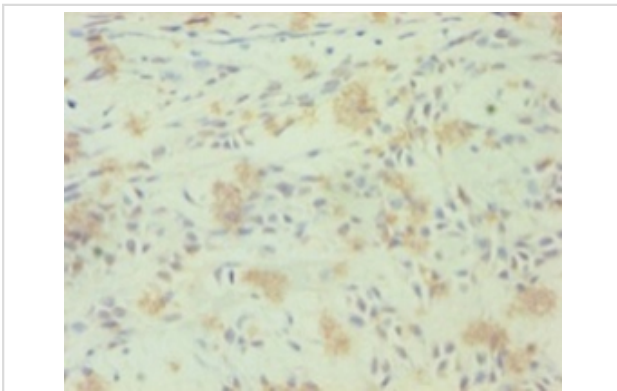
## Description

Product Name	Nuclear receptor ROR-gamma Polyclonal Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Caprylic Acid Ammonium Sulfate Precipitation purified
Applications	IHC
Species Reactivity	Hu
Specificity	The antibody detects endogenous level of total Nuclear receptor ROR-gamma polyclonal antibody.
Immunogen Type	protein
Immunogen Description	Recombinant human Nuclear receptor ROR-gamma protein B&E B <sup>1</sup> -518aa B&E B <sup>2</sup>
Target Name	Nuclear receptor ROR-gamma
Other Names	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
Accession No.	Swiss-Prot#: P51449
Uniprot	P51449
GeneID	6097;
Formulation	Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol, 0.01M PBS, PH 7.4
Storage	Store at -20°C

## Application Details

Immunohistochemistry: 1:20 - 1:200

## Images



Immunohistochemical analysis of paraffin-embedded human breast cancer using #42312 at dilution of 1:100.

## 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.

## References

[1]"Structural basis for hydroxycholesterols as natural ligands of orphan nuclear receptor RORgamma." Jin L., Martynowski D., Zheng S., Wada T., Xie W., Li Y. *Mol. Endocrinol.* 24:923-929(2010). [2]"Action of RORs and their ligands in (patho)physiology." Solt L.A., Burris T.P. *Trends Endocrinol. Metab.* 23:619-627(2012). [3]"Cryptochromes mediate rhythmic repression of the glucocorticoid receptor." Lamia K.A., Papp S.J., Yu R.T., Barish G.D., Uhlenhaut N.H., Jonker J.W., Downes M., Evans R.M. *Nature* 480:552-556(2011).

Note: This product is for in vitro research use only