abcam

ab113434

Anti-ROR gamma antibody

Key facts

Isotype	IgG
Host species	Goat
Storage buffer	pH: 7.3 Preservative: 0.02% Sodium azide Constituents: 99% Tris buffered saline, 0.5% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human RORC aa 200-250. The exact immunogen used to generate this antibody is proprietary information. Database link P51449
Purification technique	Affinity purification Immunogen
Specificity	ab113434 is expected to recognize both reported isoforms (NP_005051.2; NP_001001523.1).
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.

Reactivity data

WB

Tested

Species	Human
Dilution info	0.01-0.1 µg/mL

Notes	1 hour primary incubation at room temperature is recommended for this product.

Predicted

Species	Mouse, Rat, Horse, Cow, Dog
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	10 µg/cells
Notes	-

Predicted

Species	Mouse, Rat, Horse, Cow, Dog
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	10 µg/mL
Notes	-

Predicted

Species	Mouse, Rat, Horse, Cow, Dog
Dilution info	-
Notes	-

Target data

See full target information RORC

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). Isoform 2. Nuclear receptor essential for thymopoiesis and the development of several secondary lymphoid tissues, including lymph nodes and Peyer's patches (PubMed:21499262). Required for the generation of LTi (lymphoid tissue inducer) cells (By similarity). Regulates thymocyte survival through DNA-binding on ROREs of target gene promoter regions and recruitment of coactivaros via the AF-2 (By similarity). Also plays a key role, downstream of IL6 and TGFB and synergistically with RORA, for lineage specification of uncommitted CD4(+) T-helper (T(H)) cells into T(H)17 cells, antagonizing the T(H)1 program (PubMed:21499262). Probably regulates IL17 and IL17F expression on T(H) by binding to the essential enhancer conserved non-coding sequence 2 (CNS2) in the IL17-IL17F locus (PubMed:21499262). Plays a key role in tolerance to gut microbiota and foreign antigens in food by mediating differentiation of peripherally-induced regulatory T-cells (pTreg), which suppress inflammatory responses to commensal microorganisms and food proteins (By similarity). Specifically expressed in antigen-presenting cell populations, such as (1) type 3 innate lymphoid cells (ILC3s), which are required for tolerance to gut microbiota, (2) Thetis cells, also named Janus cells, which are enriched in gut lymph nodes during early life and are required for oral tolerance, and (3) a subset of dendritic cells (By similarity). Following activation by an unknown ligand in antigen-presenting cells, promotes recruitment of transcription regulators, such as

PRDM16 or ZBTB46, and drives differentiation of pTreg cells, which maintain immune tolerance and prevent autoimmune diseases (By similarity). May also play a role in the pre-TCR activation cascade leading to the maturation of alpha/beta T-cells and may participate in the regulation of DNA accessibility in the TCR-J(alpha) locus (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

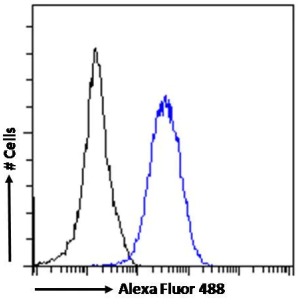
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

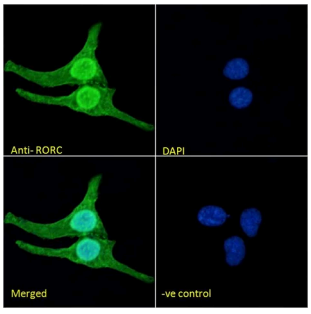
3 product images



Flow Cytometry - Anti-ROR gamma antibody (ab113434)

ROR gamma Flow Cytometry staining using goat Anti-ROR gamma antibody

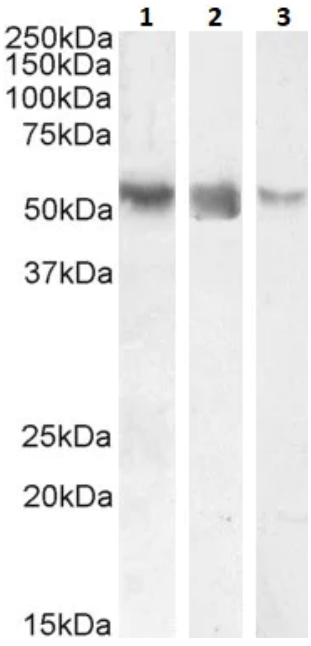
Flow cytometric analysis of paraformaldehyde fixed K562 cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10µg/mL) followed by Alexa Fluor 488 secondary antibody (1µg/mL). IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor 488 secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-ROR gamma antibody (ab113434)

ROR gamma Immunocytochemistry/ Immunofluorescence staining using goat Anti-ROR gamma antibody

Immunofluorescence analysis of paraformaldehyde fixed U2OS cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10µg/ml) followed by Alexa Fluor® 488 secondary antibody (2µg/ml), showing nuclear, cytoplasmic and plasma membrane staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10ug/ml) followed by Alexa Fluor® 488 secondary antibody (2ug/ml).



Western blot - Anti-ROR gamma antibody (ab113434)

ROR gamma Western blot staining using goat Anti-ROR gamma antibody

Detected by chemiluminescence.
All lanes:
Western blot - Anti-ROR gamma antibody (ab113434) at 0.1 µg/mL

Lane 1:
Human colon lysate (35µg protein in RIPA buffer)

Lane 2:
Human liver lysate (35µg protein in RIPA buffer)

Lane 3:
Human testes lysate (35µg protein in RIPA buffer)

Predicted band size: 58 kDa

Observed band size: 55-60 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.