abcam

ab207082

Anti-ROR gamma antibody [EPR20006]

Anti-ROR gamma antibody [EPR20006] (ab207082) is a rabbit monoclonal antibody detecting ROR gamma in **Western Blot, Flow Cytometry (Intra), IP, IHC-P**. Suitable for **Mouse**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 30 publications

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR20006
Purification technique	Affinity purification Protein A
Specificity	Our data suggests that this antibody is specific to ROR gamma isoform 2 which is known as ROR gammaT.
Concentration	0.605 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/3000
Notes	Antigen Retrieval Buffer (100X Tris-EDTA Buffer, pH 9.0) (ab93684)

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/2090
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. 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 (PubMed:17666523, PubMed:19381306, PubMed:19965867, PubMed:21853531, PubMed:22789990, PubMed:23723244). Regulates the circadian expression of clock genes such as CRY1, BMAL1 and NR1D1 in peripheral tissues and in a tissue-selective manner (PubMed:22753030). 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 (PubMed:22753030). 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 (PubMed:21853531). Also plays a role in the regulation of hepatocyte glucose metabolism through the regulation of G6PC1 and PCK1. Regulates the rhythmic expression of PROX1 and promotes its nuclear localization. Plays an indispensable role in the induction of IFN-gamma dependent anti-mycobacterial systemic immunity (By similarity). Isoform 2. Nuclear receptor essential for thymopoiesis and the development of several secondary lymphoid tissues, including lymph nodes and Peyer's patches (PubMed:10602018, PubMed:14691482, PubMed:16148126, PubMed:9881970). Required for the generation of LTi (lymphoid tissue inducer) cells (PubMed:14691482). Regulates thymocyte survival through DNA-binding on ROREs of target gene promoter regions and recruitment of coactivaros via the AF-2 (PubMed:16148126). 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:16990136, PubMed:18164222, PubMed:26607793). 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:16990136, PubMed:18164222, PubMed:26607793). 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 (PubMed:36070798, PubMed:36071167, PubMed:36071169, PubMed:40185101, PubMed:40298935). 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 (PubMed:36070798, PubMed:36071167, PubMed:36071169, PubMed:40185101, PubMed:40298935). 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 (PubMed:35831503, PubMed:40228524). 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 (PubMed:10602018).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
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

Notes

What is this antibody validated in?
Anti-ROR gamma antibody [EPR20006] (ab207082) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Flow Cytometry (Flow Cyt), Immunoprecipitation (IP), Immunohistochemistry (IHC-P) in Mouse samples.

What is the molecular weight of ROR gamma?
Anti-ROR gamma [EPR20006] (ab207082) specifically detects a band for ROR gamma (UniProt: P51450) at a molecular weight of 58kDa.

Trusted by the scientific community
Anti-ROR gamma [EPR20006] (ab207082) was first used in a scientific publication in 2017 and has been cited over 30 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR20006] also available for your convenience: ab207082, Carrier free - ab232516, Alexa Fluor® 594 - ab283626, Alexa Fluor® 488 - ab317656, Alexa Fluor® 647 - ab317657, Alexa Fluor® 555 - ab322171

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

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

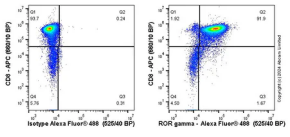
We do not recommend this combination. It is not covered by our product promise.

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.

8 product images



Flow Cytometry (Intracellular) - Anti-ROR gamma antibody [EPR20006] (ab207082)

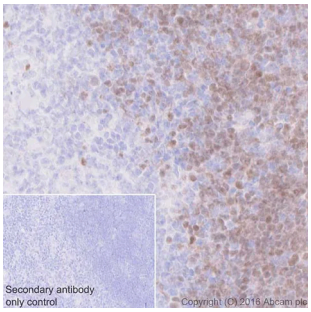
ROR gamma Flow Cytometry (Intracellular) staining of Mouse thymocytes using rabbit Anti-ROR gamma antibody

Flow cytometry overlay histogram showing mouse thymocytes stained with ab207082 (right) and isotype control (left).

The cells were incubated in 1x PBS containing 10µg/ml anti CD16/CD32 and 10% normal goat serum to block FC receptors and non-specific protein-protein interactions. The cells were then fixed and permeabilised with CytoFix/CytoPerm, followed by addition of the antibody (ab207082) (1x 10^6 in 100µl at 1.0µg/ml (1/2,000)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/2000 for 30min at 22°C

Acquisition of >30,000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter. Events were gated on live cells.



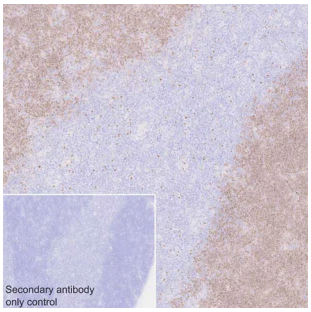
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ROR gamma antibody [EPR20006] (ab207082)

ROR gamma Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ROR gamma antibody

Immunohistochemical analysis of paraffin-embedded mouse thymus tissue labeling ROR gamma with ab207082 at 1/3000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Nuclear staining on the cortical region of mouse thymus shown at a high magnification (400×) (PMID:14691482).
Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



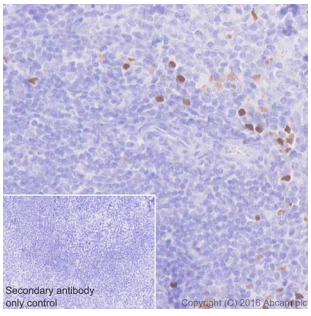
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ROR gamma antibody [EPR20006] (ab207082)

ROR gamma Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ROR gamma antibody

Immunohistochemical analysis of paraffin-embedded mouse thymus tissue labeling ROR gamma with ab207082 at 1/3000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Nuclear staining on mouse thymus cortex, located in the left and right of the image, with sporadic nuclear staining on medulla, middle region (PMID:14691482).
Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



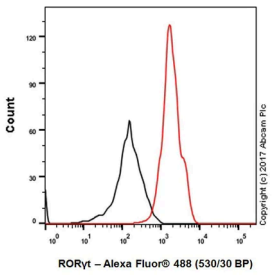
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ROR gamma antibody [EPR20006] (ab207082)

ROR gamma Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ROR gamma antibody

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling ROR gamma with ab207082 at 1/3000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Sporadic nuclear staining on mouse spleen (PMID:14691482).
Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

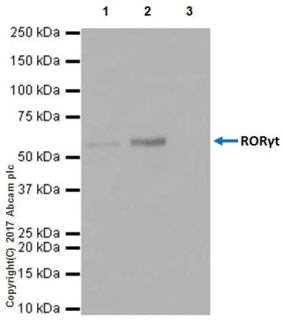
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-ROR gamma antibody [EPR20006] (ab207082)

ROR gamma Flow Cytometry (Intracellular) staining using rabbit Anti-ROR gamma antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed Mouse thymocytes labeling ROR gamma with ab207082 at 1/50 dilution. Goat anti rabbit IgG (Alexa Fluorr® 488) at 1/2000 dilution was used as the secondary antibody.
Note:Cell surface staining with PE conjugated anti-mouse CD8 and Alexa Fluorr® 647 conjugated anti mouse CD4 antibodies, followed by fixation with 4% PFA for 10 min and intracellular staining with ab207082. The image shows thymocytes in the CD4+CD8+ (red) or the CD4+CD8- (black, negative control) gate.



Immunoprecipitation - Anti-ROR gamma antibody [EPR20006] (ab207082)

ROR gamma was immunoprecipitated from 0.35 mg of Mouse thymus lysate with ab207082 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab207082 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: Mouse thymus lysate, 10 µg (Input).

Lane 2: ab207082 IP in Mouse thymus lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab207082 inMouse thymus lysate.

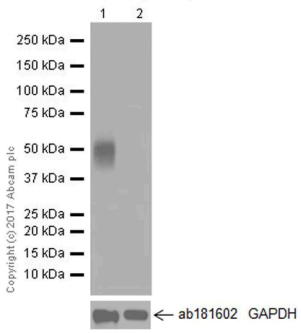
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds.

All lanes:
Immunoprecipitation - Anti-ROR gamma antibody [EPR20006] (ab207082)

Predicted band size: 58 kDa

Observed band size: 58 kDa



Western blot - Anti-ROR gamma antibody [EPR20006] (ab207082)

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

Blocking/Dilution buffer: 5% NFDM/TBST.
The expression profile is consistent with the literature: PMID 14691482; PMID 9881970.

All lanes:
Western blot - Anti-ROR gamma antibody [EPR20006] (ab207082) at 1/2000 dilution

Lane 1:
Mouse thymus lysate at 20 µg

Lane 2:
Mouse liver lysate at 20 µg

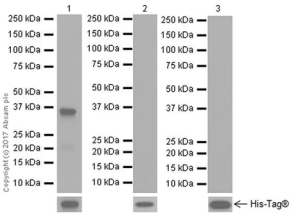
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 58 kDa

Observed band size: 58 kDa

Exposure time: 3s



Western blot - Anti-ROR gamma antibody [EPR20006] (ab207082)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1: 3 seconds; Lane 2/3: 3 minutes.

Lane 1:
Western blot - Anti-ROR gamma antibody [EPR20006] (ab207082) at 1/10000 dilution

Lanes 2 - 3:
Western blot - Anti-ROR gamma antibody [EPR20006] (ab207082) at 1/1000 dilution

Lane 1:
His-tagged mouse ROR gamma recombinant protein (aa 1-266) at 0.01 µg

Lane 2:
His-tagged mouse ROR alpha recombinant protein (aa 48-215) at 0.01 µg

Lane 3:
His-tagged mouse ROR beta recombinant protein (aa 9-140) at 0.01 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 58 kDa

Observed band size: 35 kDa

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