abcam

Product datasheet

# Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] - BSA and Azide free ab232472

KO VALIDATED Recombinant RabMAb

5 Images

## Overview

| | |
|---|---|
| **Product name** | Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] - BSA and Azide free |
| **Description** | Rabbit monoclonal [EPR7106] to Retinoid X Receptor alpha/RXRA - BSA and Azide free |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** ICC/IF, IP, WB<br>**Unsuitable for:** Flow Cyt or IHC-P |
| **Species reactivity** | **Reacts with:** Mouse, Rat, Human |
| **Immunogen** | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | ICC/IF: MCF7 cells and wild-type HCT116 cells. IP: HeLa whole cell lysate. |
| **General notes** | ab232472 is the carrier-free version of **ab125001**.<br><br>Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.<br><br>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.<br><br>Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.<br><br>This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.<br><br>This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. |

## Properties

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C. Do Not Freeze. |
| **Storage buffer** | pH: 7.2<br>Constituent: PBS |
| **Carrier free** | Yes |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EPR7106 |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab232472 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **ICC/IF** | | Use at an assay dependent concentration.<br>For unpurified use at 1/100 - 1/250 dilution. |
| **IP** | | Use at an assay dependent concentration. |
| **WB** | | Use at an assay dependent concentration. Detects a band of approximately 54 kDa (predicted molecular weight: 51 kDa). |

**Application notes** Is unsuitable for Flow Cyt or IHC-P.

## Target

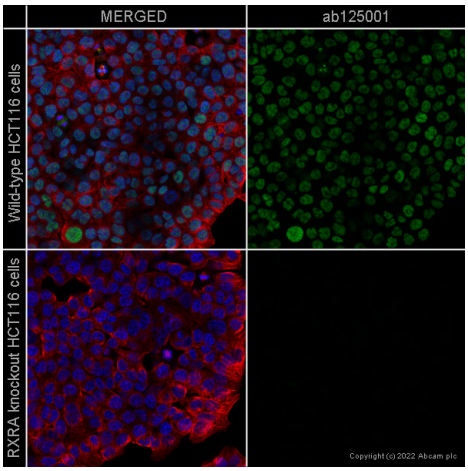
**Function** Receptor for retinoic acid. Retinoic acid receptors bind as heterodimers to their target response elements in response to their ligands, all-trans or 9-cis retinoic acid, and regulate gene expression in various biological processes. The RAR/RXR heterodimers bind to the retinoic acid response elements (RARE) composed of tandem 5'-AGGTCA-3' sites known as DR1-DR5. The high affinity ligand for RXRs is 9-cis retinoic acid. RXRA serves as a common heterodimeric partner for a number of nuclear receptors. The RXR/RAR heterodimers bind to the retinoic acid response elements (RARE) composed of tandem 5'-AGGTCA-3' sites known as DR1-DR5. In the absence of ligand, the RXR-RAR heterodimers associate with a multiprotein complex containing transcription corepressors that induce histone acetylation, chromatin condensation and transcriptional suppression. On ligand binding, the corepressors dissociate from the receptors and associate with the coactivators leading to transcriptional activation. The RXRA/PPARA heterodimer is required for PPARA transcriptional activity on fatty acid oxidation genes such as ACOX1 and the P450 system genes.

**Tissue specificity** Highly expressed in liver, also found in lung, kidney and heart.

**Sequence similarities** Belongs to the nuclear hormone receptor family. NR2 subfamily.

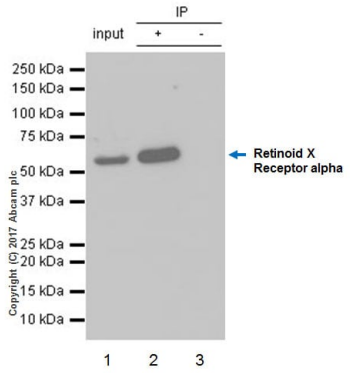
| | |
|---|---|
| | Contains 1 nuclear receptor DNA-binding domain. |
| **Domain** | Composed of three domains: a modulating N-terminal domain (AF1 domain), a DNA-binding domain and a C-terminal ligand-binding domain (AF2 domain). |
| **Post-translational modifications** | Phosphorylated on serine and threonine residues mainly in the N-terminal modulating domain. Constiutively phosphorylated on Ser-21 in the presence or absence of ligand. Under stress conditions, hyperphosphorylated by activated JNK on Ser-56, Ser-70, Thr-82 and Ser-260 (By similarity). Phosphorylated on Ser-27, in vitro, by PKA. This phosphorylation is required for repression of cAMP-mediated transcriptional activity of RARA.<br>Sumoylation negatively regulates transcriptional activity. Desumoylated specifically by SENP6. |
| **Cellular localization** | Nucleus. |

## Images




Immunocytochemistry/ Immunofluorescence - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] - BSA and Azide free (ab232472)

This data was developed using the same antibody clone in a different buffer formulation (**ab125001**). **ab125001** staining Retinoid X Receptor alpha in wild-type HCT116 cells (top panel) and RXRA knockout HCT116 cells (bottom panel) (**ab273708**). The cells were fixed with 4% paraformaldehyde (10 min) then permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with **ab125001** at 0.2µg/ml concentration and **ab7291** (Mouse monoclonal to alpha Tubulin) at 1/1000 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (**ab150081**) at 2 µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) (**ab150120**) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).



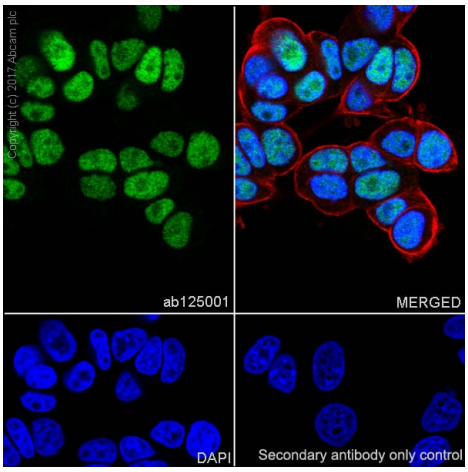

Immunoprecipitation - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] - BSA and Azide free (ab232472)

**ab125001** (purified) at 1:20 dilution (0.6µg) immunoprecipitating Retinoid X Receptor alpha/RXRA in HeLa whole cell lysate.

**Lane 1:** HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate, 10µg.
**Lane 2 (+): ab125001** & HeLa whole cell lysate
**Lane 3 (-):** Rabbit monoclonal IgG (**ab172730**) instead of **ab125001** in HeLa whole cell lysate

For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.

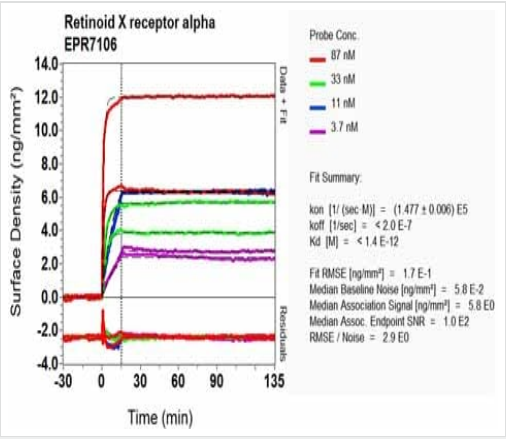
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab125001**).




Immunocytochemistry/ Immunofluorescence - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] - BSA and Azide free (ab232472)

Immunocytochemistry/ Immunofluorescence analysis of MCF7 (human breast adenocarcinoma epithelial cell) cells labeling Retinoid X Receptor alpha/RXRA with Purified **ab125001** at 1:500 dilution. Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). **ab150077** Goat anti rabbit IgG (Alexa Fluor® 488) was used as the secondary antibody at 1:1000 dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab125001**).




OI-RD Scanning - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] - BSA and Azide free (ab232472)

Equilibrium disassociation constant ($K_D$)

Learn more about $K_D$

**Click here to learn more about $K_D$**

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab125001**).


Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] - BSA and Azide free (ab232472)



## Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

## Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors