# abcam

# Product datasheet

# Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] ab125001



リコンピナント

RabMAb

★★★★★ 5 Abreviews 20 References 画像数 8

#### 製品の概要

製品名 Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106]

製品の詳細 Rabbit monoclonal [EPR7106] to Retinoid X Receptor alpha/RXRA

由来種 Rabbit

アプリケーション 適用あり: WB, IP, ICC/IF

適用なし: Flow Cyt or IHC-P

種交差性 交差種: Mouse, Rat, Human

免疫原 Synthetic peptide corresponding to Human Retinoid X Receptor alpha/RXRA (N terminal).

ポジティブ・コントロール WB: MCF7, HeLa, K562, RAW 264.7, PC12 and NIH 3T3 cell lysates, Wild-type HCT116 cell

lysate. ICC/IF: MCF7 cells and wild-type HCT116 cells. IP: HeLa whole cell lysate.

特記事項 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 production

For more information see here.

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

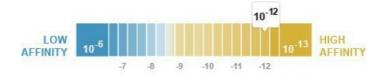
# 製品の特性

製品の状態 Liquid

保存方法 Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long

term. Avoid freeze / thaw cycle.

解離定数( $K_D$ 値)  $K_D = 1.40 \times 10^{-12} M$ 



## Learn more about K<sub>D</sub>

**バッファー** pH: 7.20

Preservative: 0.01% Sodium azide

Constituents: 59% PBS, 0.05% BSA, 40% Glycerol

精製度 Protein A purified

**ポリ/モノ** モノクローナル

**クローン名** EPR7106

アイソタイプ lgG

## アプリケーション

**The Abpromise guarantee** <u>Abpromise保証は、</u>次のテスト済みアプリケーションにおけるab125001の使用に適用されます アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB	**** <u>(3)</u>	1/1000 - 1/10000. Detects a band of approximately 54 kDa (predicted molecular weight: 51 kDa).
IP		1/10 - 1/100.
ICC/IF		Use a concentration of 0.2 µg/ml.  For unpurified use at 1/100 - 1/250 dilution.

追加情報 Is unsuitable for Flow Cyt or IHC-P.

#### ターゲット情報

機能

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.

組織特異性 Highly expressed in liver, also found in lung, kidney and heart.

配列類似性 Belongs to the nuclear hormone receptor family. NR2 subfamily.

Contains 1 nuclear receptor DNA-binding domain.

ドメイン Composed of three domains: a modulating N-terminal domain (AF1 domain), a DNA-binding

domain and a C-terminal ligand-binding domain (AF2 domain).

翻訳後修飾 Phosphorylated on serine and threonine residues mainly in the N-terminal modulating domain.

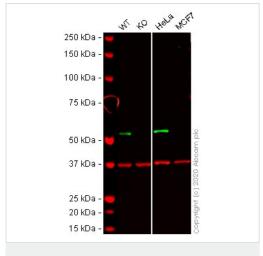
Constitutively phosphorylated on Ser-21 in the presence or absence of ligand. Under stress conditions, hyperphosphorylated by activated JNK on Ser-56, Ser-70, Thr-82 and Ser-260 (By similarity). Phosphorylated on Ser-27, in vitro, by PKA. This phosphorylation is required for repression of cAMP-mediated transcriptional activity of RARA.

Sumoylation negatively regulates transcriptional activity. Desumoylated specifically by SENP6.

細胞内局在

Nucleus.

#### 画像



Western blot - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] (ab125001)

**All lanes :** Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] (ab125001) at 1/1000 dilution

Lane 1: Wild-type HCT116 cell lysate

Lane 2: RXRA knockout HCT116 cell lysate

Lane 3 : HeLa cell lysate

Lane 4 : MCF7 cell lysate

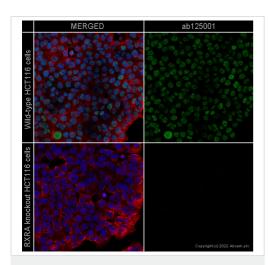
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

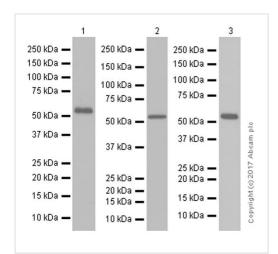
Predicted band size: 51 kDa Observed band size: 53 kDa

**Lanes 1 - 4:** Merged signal (red and green). Green - ab125001 observed at 53 kDa. Red - loading control <u>ab8245</u> (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab125001 was shown to react with Anti-Retinoid X Receptor alpha in HCT 116 wild-type cells in western blot with loss of signal observed in RXRA knockout cell line <a href="mailto:ab273708">ab273708</a> (RXRA knockout cell line <a href="mailto:ab273708">ab273708</a> (RXRA knockout cell lysate <a href="mailto:ab275245">ab275245</a>). HCT 116 wild-type and RXRA knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab125001 and <a href="mailto:ab8245">ab8245</a> (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit lgG H&L (IRDye® 800CW) preabsorbed (<a href="mailto:ab216773">ab216773</a>) and Goat anti-Mouse lgG H&L (IRDye® 680RD) preabsorbed (<a href="mailto:ab216776">ab216773</a>) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] (ab125001)



Western blot - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] (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 0.2 $\mu$ g/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 lgG (Alexa Fluor® 488) (ab150081) at 2  $\mu$ g/ml (shown in green) and a goat secondary antibody to mouse lgG (Alexa Fluor® 594) (ab150120) at 2  $\mu$ g/ml (shown in red). Nuclear DNA was labelled in blue with DAPI. Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).

**All lanes :** Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] (ab125001) at 1/1000 dilution (purified)

**Lane 1**: PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates

Lane 2: NIH/3T3 (Mouse embryonic fibroblast) whole cell lysates

Lane 3: HeLa (Human cervix adenocarcinoma epithelial cell)

whole cell lysates

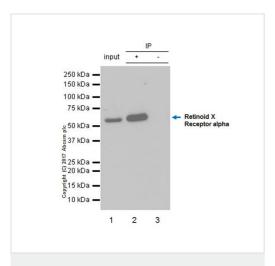
Lysates/proteins at 15 µg per lane.

#### Secondary

**All lanes :** Goat Anti-Rabbit lgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 51 kDa

Blocking and diluting buffer: 5% NFDM/TBST.



Immunoprecipitation - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] (ab125001)

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

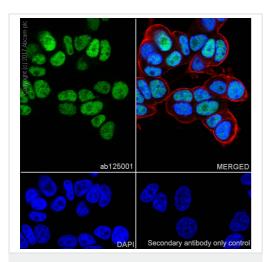
Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate, 10µg.

Lane 2 (+): ab125001 & HeLa whole cell lysate

Lane 3 (-): Rabbit monoclonal IgG (<u>ab172730</u>) instead of ab125001 in HeLa whole cell lysate

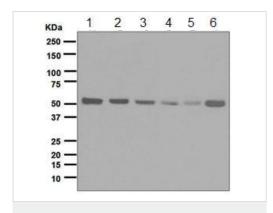
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used for detection at 1:1000 dilution.

Blocking and diluting buffer: 5% NFDM/TBST.



Immunocytochemistry/ Immunofluorescence - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] (ab125001)

Immunocytochemistry 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). <a href="mailto:ab150077">ab150077</a> Goat anti rabbit lgG(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.



Western blot - Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] (ab125001)

**All lanes**: Anti-Retinoid X Receptor alpha/RXRA antibody [EPR7106] (ab125001) at 1/1000 dilution (unpurified)

Lane 1 : MCF7 cell lysate Lane 2 : HeLa cell lysate Lane 3 : K562 cell lysate

Lane 4: RAW 264.7 cell lysate

Lane 5 : PC12 cell lysate

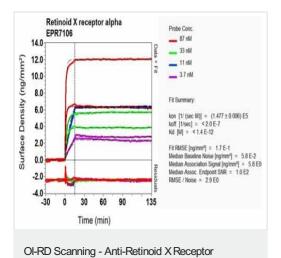
Lane 6: NIH 3T3 cell lysate

Lysates/proteins at 10 µg per lane.

# Secondary

All lanes: Goat anti-Rabbit HRP at 1/2000 dilution

Predicted band size: 51 kDa

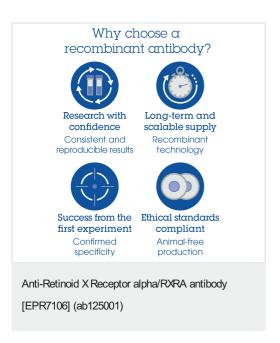


alpha/RXRA antibody [EPR7106] (ab125001)

Equilibrium disassociation constant (K<sub>D</sub>)

Learn more about K<sub>D</sub>

# Click here to learn more about K<sub>D</sub>



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