

Product datasheet

Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade ab109234

KO VALIDATED Recombinant RabMAb

[27 References](#) [8 Images](#)

Overview

Product name	Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade
Description	Rabbit monoclonal [EPR4552] to Vitamin D Receptor - ChIP Grade
Host species	Rabbit
Tested applications	Suitable for: WB, IP, ChIP Unsuitable for: Flow Cyt, ICC/IF 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	WB: HeLa, U-937, T-47D and SKBR-3 cell lysates; Rat and mouse kidney tissue lysates. ChIP: Chromatin prepared from T-47D cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR4552
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab109234 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

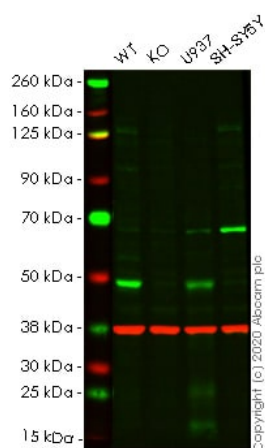
Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 48 kDa (predicted molecular weight: 48 kDa). For unpurified use at 1/1000 - 1/10000.
IP		1/30.
ChIP		Use 5 µg for 25 µg of chromatin.

Application notes Is unsuitable for Flow Cyt, ICC/IF or IHC-P.

Target

Function	Nuclear hormone receptor. Transcription factor that mediates the action of vitamin D3 by controlling the expression of hormone sensitive genes. Regulates transcription of hormone sensitive genes via its association with the WINAC complex, a chromatin-remodeling complex. Recruited to promoters via its interaction with the WINAC complex subunit BAZ1B/WSTF, which mediates the interaction with acetylated histones, an essential step for VDR-promoter association. Plays a central role in calcium homeostasis.
Involvement in disease	Defects in VDR are the cause of rickets vitamin D-dependent type 2A (VDDR2A) [MIM:277440]. A disorder of vitamin D metabolism resulting in severe rickets, hypocalcemia and secondary hyperparathyroidism. Most patients have total alopecia in addition to rickets.
Sequence similarities	Belongs to the nuclear hormone receptor family. NR1 subfamily. Contains 1 nuclear receptor DNA-binding domain.
Domain	Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain.
Cellular localization	Nucleus.

Images



Western blot - Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade (ab109234)

All lanes : Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade (ab109234) at 1/1000 dilution

Lane 1 : Wild-type HeLa lysate

Lane 2 : Vitamin D Receptor knockout HeLa lysate

Lane 3 : U-937 lysate

Lane 4 : SH-SY5Y lysate

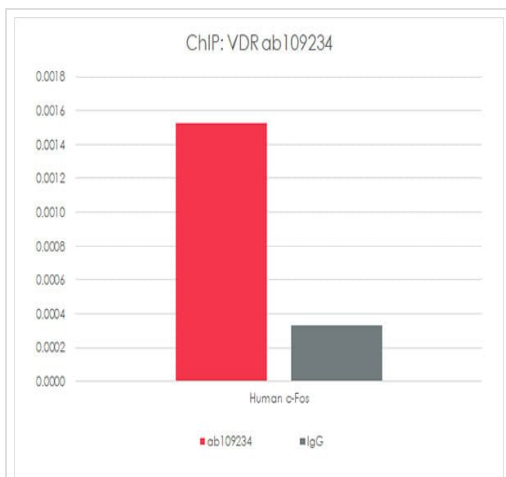
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 48 kDa

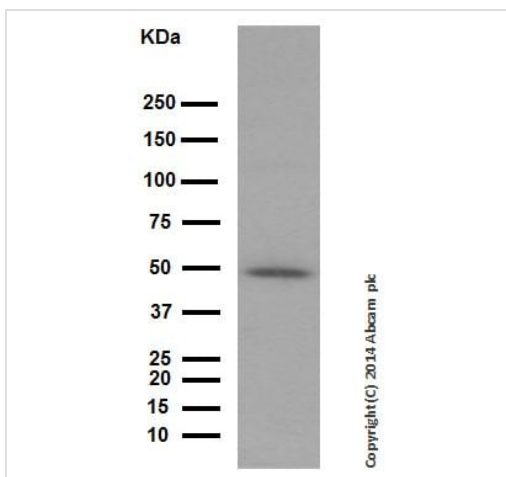
Lanes 1-4: Merged signal (red and green). Green - ab109234 observed at 50 kDa. Red - loading control [ab8245](#) observed at 37 kDa.

ab109234 Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade was shown to specifically react with Vitamin D Receptor in wild-type HeLa cells. Loss of signal was observed when knockout cell line [ab265430](#) (knockout cell lysate [ab257796](#)) was used. Wild-type and Vitamin D Receptor knockout samples were subjected to SDS-PAGE. ab109234 and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



ChIP - Anti-Vitamin D Receptor antibody [EPR4552]
- ChIP Grade (ab109234)

Chromatin was prepared from T-47D cells according to the Abcam X-ChIP protocol. Cells were fixed with 1% formaldehyde for 10 minutes. The ChIP was performed with 25 µg of chromatin, 5 µg of ab109234 (red), and 20 µL of protein A/G sepharose beads slurry (10 µL of sepharose A beads + 10 µL of sepharose G beads). 5 µg of rabbit normal IgG was added to the beads as a control sample (grey). The immunoprecipitated DNA was quantified by real time PCR (SYBR Green chemistry) with primers to c-Fos.



Western blot - Anti-Vitamin D Receptor antibody
[EPR4552] - ChIP Grade (ab109234)

Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade
(ab109234) at 1/5000 dilution (purified) + HeLa cell lysate at 20 µg

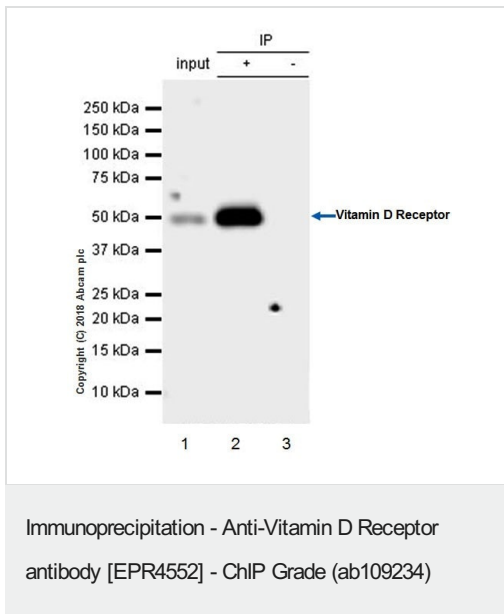
Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 48 kDa

Observed band size: 48 kDa

Blocking and diluting buffer: 5% NFDM/TBST.

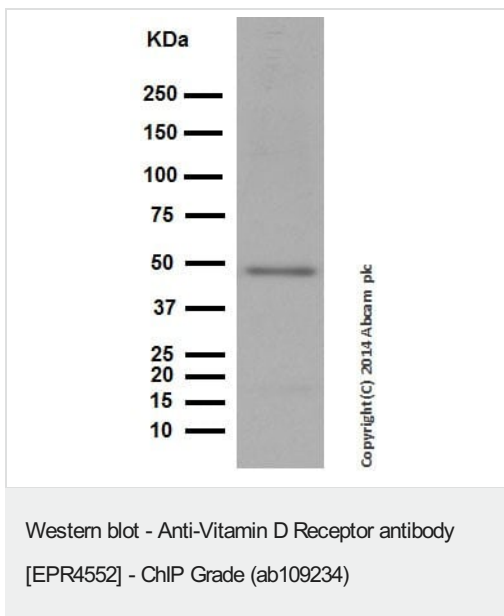


Lane 1 (input): T-47D (Human ductal breast epithelial tumor epithelial cell) whole cell lysate, 10 µg

Lane 2(+): T-47D whole cell lysate

Lane 3 (-): Rabbit monoclonal IgG ([ab172730](#)) instead of ab109234 in T-47D whole cell lysate

Ab109234 immunoprecipitating Vitamin D receptor in T-47D whole cell lysates. Capture antibody was used at a 1/30 dilution (2 µg in 0.35 mg lysates). For western blotting, primary antibody was used as ab109234 at 1/1000 dilution (0.62 µg/mL). VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/5000 dilution.



Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade (ab109234) at 1/5000 dilution (purified) + Mouse kidney tissue lysate at 20 µg

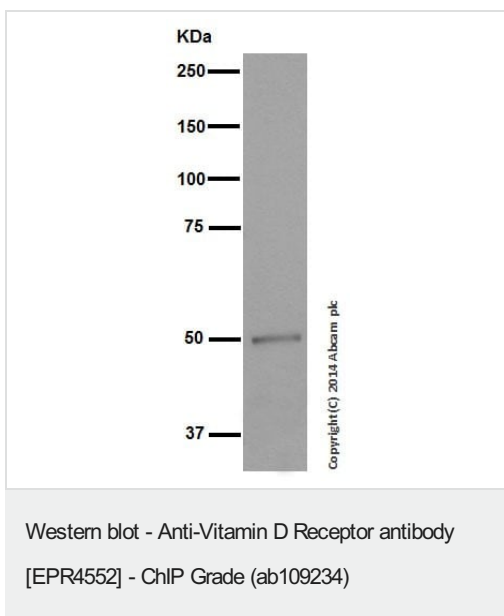
Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 48 kDa

Observed band size: 48 kDa

Blocking and diluting buffer: 5% NFDM/TBST.



Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade (ab109234) at 1/1000 dilution (purified) + Rat kidney tissue lysate at 10 µg

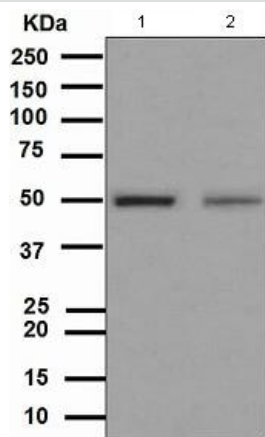
Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 48 kDa

Observed band size: 48 kDa

Blocking and diluting buffer: 5% NFDM/TBST.



Western blot - Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade (ab109234)

All lanes : Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade (ab109234) at 1/1000 dilution (unpurified)

Lane 1 : T47D cell lysate

Lane 2 : SKBR-3 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP-conjugated goat anti-rabbit IgG at 1/2000 dilution

Predicted band size: 48 kDa

Observed band size: 48 kDa

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Vitamin D Receptor antibody [EPR4552] - ChIP Grade (ab109234)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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