abcam

Product datasheet

Anti-Estrogen Related Receptor alpha antibody [EPR46Y] ab76228

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-Estrogen Related Receptor alpha antibody [EPR46Y]
Description	Rabbit monoclonal [EPR46Y] to Estrogen Related Receptor alpha
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP, Flow Cyt
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human Estrogen Related Receptor alpha aa 1-100 (N terminal). The exact sequence is proprietary.
Positive control	HeLa whole cell lysate (**ab150035**)
General notes	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® 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. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR46Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab76228 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)**	1/1000 - 1/10000. Predicted molecular weight: 55 kDa.
IP		1/20.
Flow Cyt		1/20.

Target

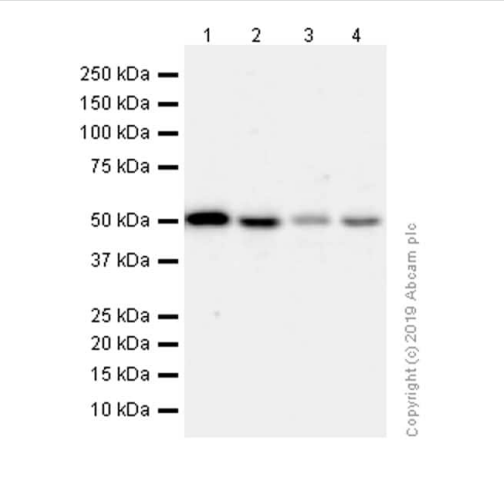
Function Binds to an ERR-alpha response element (ERRE) containing a single consensus half-site, 5'-TNAAGGTCA-3'. Can bind to the medium-chain acyl coenzyme A dehydrogenase (MCAD) response element NRRE-1 and may act as an important regulator of MCAD promoter. Binds to the C1 region of the lactoferrin gene promoter. Requires dimerization and the coactivator, PGC-1A, for full activity. The ERRalpha/PGC1alpha complex is a regulator of energy metabolism.

Sequence similarities Belongs to the nuclear hormone receptor family. NR3 subfamily.
Contains 1 nuclear receptor DNA-binding domain.

Post-translational modifications Phosphorylation on Ser-19 enhances sumoylation on Lys-14 increasing repression of transcriptional activity.
Sumoylated by SUMO2. Main site is Lys-14 which is enhanced by phosphorylation on Ser-19, cofactor activation, and by interaction with PIAS4. Sumoylation enhances repression of transcriptional activiy, but has no effect on subcellular location nor on DNA binding.

Cellular localization Nucleus.

Images



Western blot - Anti-Estrogen Related Receptor alpha antibody [EPR46Y] (ab76228)

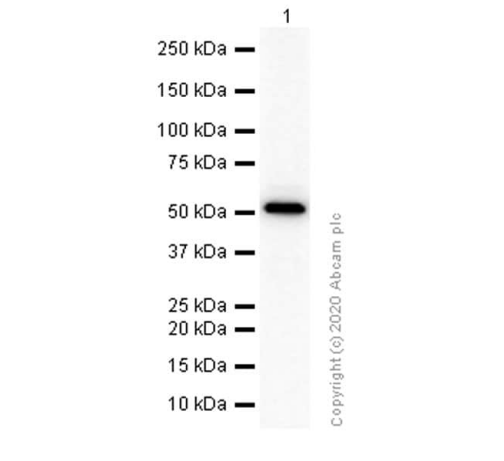
All lanes : Anti-Estrogen Related Receptor alpha antibody [EPR46Y] (ab76228) at 1/1000 dilution (Purified)

Lane 1 : MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate
Lane 2 : Mouse brain lysate
Lane 3 : Mouse kidney lysate
Lane 4 : Rat brain lysate

Lysates/proteins at 20 µg per lane.

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

Predicted band size: 55 kDa
Observed band size: 55 kDa

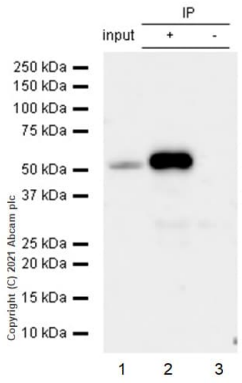


Western blot - Anti-Estrogen Related Receptor alpha antibody [EPR46Y] (ab76228)

Anti-Estrogen Related Receptor alpha antibody [EPR46Y] (ab76228) at 1/1000 dilution (Purified) + HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 15 µg

Secondary
Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

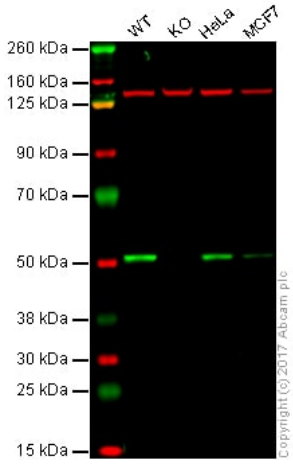
Predicted band size: 55 kDa
Observed band size: 55 kDa



Immunoprecipitation - Anti-Estrogen Related Receptor alpha antibody [EPR46Y] (ab76228)

ab76228 used at 1:20 dilution (2µg) immunoprecipitating Estrogen Related Receptor alpha in Hela whole cell lysates.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg.
Lane 2 (+): HeLa whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of **ab190685** in HeLa whole cell lysate.

For western blotting, **ab227648** and VeriBlot for IP Detection Reagent (HRP)(**ab131366**) at 1/1000 dilution were used.

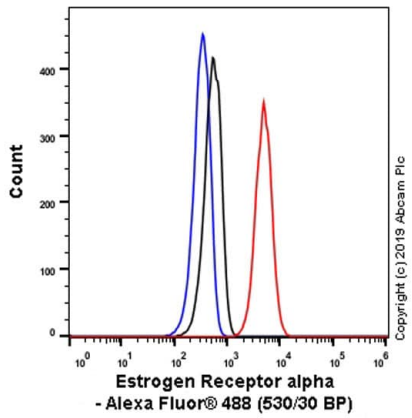


Western blot - Anti-Estrogen Related Receptor alpha antibody [EPR46Y] (ab76228)

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: Estrogen Related Receptor alpha knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: MCF7 whole cell lysate (20 µg)

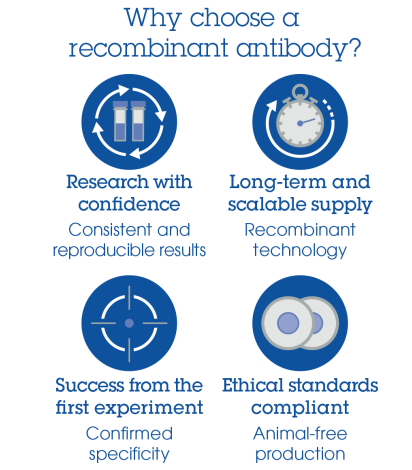
Lanes 1 - 4: Merged signal (red and green). Green - ab76228 observed at 55 kDa. Red - loading control, **ab18058**, observed at 130 kDa.

ab76228 was shown to specifically react with Estrogen Related Receptor alpha in wild-type HAP1 cells as signal was lost in Estrogen Related Receptor alpha knockout cells. Wild-type and Estrogen Related Receptor alpha knockout samples were subjected to SDS-PAGE. Ab76228 and **ab18058** (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Flow Cytometry - Anti-Estrogen Related Receptor alpha antibody [EPR46Y] (ab76228)

Flow cytometric analysis of 4% Paraformaldehyde fixed 90% Methanol permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling Estrogen Receptor alpha with ab76228 at 1/20 dilution (10 µg/ml) compared with a Rabbit monoclonal IgG (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 was used as the secondary antibody.



Anti-Estrogen Related Receptor alpha antibody [EPR46Y] (ab76228)

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