**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
Unsuitable for: ICC or IHC-P

**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**

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

This product is a recombinant rabbit monoclonal antibody.

**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: 9% PBS, 40% Glycerol, 0.05% BSA, 50% Tissue culture supernatant

**Purity**
Tissue culture supernatant

**Clonality**
Monoclonal

**Clone number**
EPR46Y

**Isotype**
IgG
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 activity, but has no effect on subcellular location nor on DNA binding.

Cellular localization

Nucleus.

Application

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.

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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<td>IP</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>Flow Cyt</td>
<td>1/20. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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Application notes

Is unsuitable for ICC or IHC-P.
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.

Anti-Estrogen Related Receptor alpha antibody [EPR46Y] (ab76228) at 1/5000 dilution + HeLa cell lysate at 10 µg

**Secondary**
HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 55 kDa
**Observed band size:** 55 kDa
Estrogen Related Receptor alpha was immunoprecipitated using 0.5mg Hela whole cell extract, 10µg of Rabbit monoclonal to Estrogen Related Receptor alpha and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).

The antibody was incubated under agitation with Protein G beads for 10min, Hela whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab76228.


Band: Band: 55kDa: Estrogen Related Receptor alpha.

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

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