Product datasheet

**Anti-TXNRD1 antibody [EPNCIR129] ab124954**

**Overview**

**Product name**
Anti-TXNRD1 antibody [EPNCIR129]

**Description**
Rabbit monoclonal [EPNCIR129] to TXNRD1

**Host species**
Rabbit

**Tested applications**
Suitable for: WB, IP, IHC-P, Flow Cyt, ICC/IF

**Species reactivity**
Reacts with: Mouse, Rat, Human

**Immunogen**
Recombinant full length protein corresponding to Mouse TXNRD1.

**Database link:** Q9JMH6

**Positive control**
Mouse liver, NIH 3T3, RAW264.7, Human fetal liver and Rat liver lysates; HeLa cells.

**General notes**
This antibody was developed as part of a collaboration between Epitomics, the National Cancer Institute's Center for Cancer Research and the lab of Dolph Hatfield. View antibodies from NCI Center for Cancer Research Collaboration.

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.

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

**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, 0.05% BSA, 59% PBS

Purity
Protein A purified

Clonality
Monoclonal

Clone number
EPNCIR129

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab124954 in the following tested applications.

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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>WB</td>
<td>1/1000 - 1/10000. Detects a band of approximately 55 kDa (predicted molecular weight: 55, 67 kDa).</td>
<td></td>
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<tr>
<td>IP</td>
<td>1/10 - 1/100.</td>
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<tr>
<td>IHC-P</td>
<td>1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. (Heat to 98°C, allow to cool for 10-20 minutes)</td>
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<tr>
<td>Flow Cyt</td>
<td>1/100 - 1/500. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>ICC/IF</td>
<td>1/100 - 1/250.</td>
<td></td>
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</tbody>
</table>

Target

Function
Isoform 1 may possess glutaredoxin activity as well as thioredoxin reductase activity and induces actin and tubulin polymerization, leading to formation of cell membrane protrusions. Isoform 4 enhances the transcriptional activity of estrogen receptors alpha and beta while isoform 5 enhances the transcriptional activity of the beta receptor only. Isoform 5 also mediates cell death induced by a combination of interferon-beta and retinoic acid.

Tissue specificity
Isoform 1 is expressed predominantly in Leydig cells (at protein level). Also expressed in ovary, spleen, heart, liver, kidney and pancreas and in a number of cancer cell lines. Isoform 4 is widely expressed with highest levels in kidney, testis, uterus, ovary, prostate, placenta and fetal liver.

Sequence similarities
Belongs to the class-I pyridine nucleotide-disulfide oxidoreductase family.
Contains 1 glutaredoxin domain.

Domain
The N-terminal glutaredoxin domain found in isoform 1 does not contain the C-P-Y-C redox-active motif normally found in glutaredoxins and has been found to be inactive in classical glutaredoxin assays.

Post-translational modifications
The N-terminus of isoform 5 is blocked.
ISGylated.

Cellular localization
Cytoplasm and Cytoplasm. Nucleus.
All lanes: Anti-TXNRD1 antibody [EPNCIR129] (ab124954) at 1/10000 dilution (purified)

Lane 1: rat liver lysate
Lane 2: NIH/3T3 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes: HRP goat anti-rabbit IgG (H+L) at 1/20000 dilution

Predicted band size: 55, 67 kDa
Observed band size: 55 kDa

why is the actual band size different from the predicted?

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST

Anti-TXNRD1 antibody [EPNCIR129] (ab124954) at 1/10000 dilution (purified) + HeLa cell lysate at 10 µg

Secondary
HRP goat anti-rabbit IgG (H+L) at 1/100000 dilution

Predicted band size: 55, 67 kDa
Observed band size: 55 kDa

why is the actual band size different from the predicted?

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
Western blot - Anti-TXNRD1 antibody [EPNCIR129] (ab124954) at 1/10000 dilution (purified) + HepG2 cell lysate at 10 µg

**Secondary**
HRP goat anti-rabbit IgG (H+L) at 1/100000 dilution

**Predicted band size:** 55, 67 kDa
**Observed band size:** 55 kDa

*why is the actual band size different from the predicted?*

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST

Immunofluorescence staining of HeLa cells with purified ab124954 at a working dilution of 1/150, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 488 goat anti-rabbit (ab150077), used at a dilution of 1/1000. ab7291, a mouse anti-tubulin antibody (1/1000), was used to stain tubulin along with ab150120 (Alexa Fluor® 594 goat anti-mouse, 1/1000), shown in the top right hand panel. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100. The negative controls are shown in bottom middle and right hand panels - for negative control 1, purified ab124954 was used at a dilution of 1/500 followed by an Alexa Fluor® 594 goat anti-mouse antibody (ab150120) at a dilution of 1/500. For negative control 2, ab7291 (mouse anti-tubulin) was used at a dilution of 1/500 followed by an Alexa Fluor® 488 goat anti-rabbit antibody (ab150077) at a dilution of 1/400.
Immunohistochemical staining of paraffin embedded human testis with purified ab124954 at a working dilution of 1/150. The secondary antibody used is HRP goat anti-rabbit IgG H&L (ab97051) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

ab124954 (purified) at 1/40 immunoprecipitating TXNRD1 in 10 μg Jurkat (Lanes 1 and 2, observed at 55 kDa). Lane 3 - PBS. For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10,000 dilution. Blocking buffer and concentration: 5% NFDM/TBST Dilution buffer and concentration: 5% NFDM/TBST.
Overlay histogram showing HeLa cells fixed in 4% PFA and stained with purified ab124954 at a dilution of 1 in 120 (red line). The secondary antibody used was FITC goat anti-rabbit at a dilution of 1 in 500. Rabbit monoclonal IgG was used as an isotype control (black line) and cells incubated in the absence of both primary and secondary antibody were used as a negative control (blue line).

**Flow Cytometry - Anti-TXNRD1 antibody**

[EPNCIR129] (ab124954)

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**Western blot - Anti-TXNRD1 antibody**

[EPNCIR129] (ab124954)

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**All lanes**: Anti-TXNRD1 antibody [EPNCIR129] (ab124954) at 1/1000 dilution (unpurified)

**Lane 1**: Mouse liver lysates

**Lane 2**: NIH 3T3 lysates

**Lane 3**: RAW264.7 lysates

**Lane 4**: Human fetal liver lysates

**Lane 5**: Rat liver lysates

Lysates/proteins at 10 µg per lane.

**Secondary**

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

**Predicted band size**: 55, 67 kDa
Unpurified ab124954, at 1/100 dilution, staining TXNRD1 in HeLa cells by Immunofluorescence.

**Please note:** All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

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