

## Product datasheet

# PRX Pathway (TRX, TXNRD1, PRX1) Western Blot Cocktail ab184868

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### Overview

<b>Product name</b>	PRX Pathway (TRX, TXNRD1, PRX1) Western Blot Cocktail
<b>Sample type</b>	Cell Lysate
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Product overview</b>	<p>The PRX pathway Western blot cocktail is designed to determine the relative abundance of several important proteins involved in the thioredoxin redox pathway.</p> <p>Thioredoxin (TRX) is a small enzyme (12kDa) that facilitates the reduction of other enzymes via cysteine thiol-disulfide exchange. Thioredoxin is used by cells to reduce ROS amounts and in redox signaling processes. Thioredoxin reductase 1 (TXNRD1) is found in the cytoplasm and possesses glutaredoxin and thioredoxin reductase activity. TXNRD1 utilizes its redox-active disulfide bond to reduce oxidized thioredoxin. Also involved in the thioredoxin redox pathway and additionally shown to be upregulated in a variety of cancers is the relatively abundant peroxiredoxin 1 (PRX1). Peroxiredoxin 1 is an antioxidant enzyme that helps regulate peroxide levels and is involved in redox signaling. Peroxiredoxin 1's activity is regenerated after being reduced by thioredoxin.</p>
<b>Notes</b>	<p>These three readouts are easily resolved by Western blot given their different molecular weights. As all primary antibodies in the WB cocktail are rabbit antibodies, an anti-rabbit secondary should be used for detection.</p> <p>Expected and observed MWs:            Thioredoxin: 12 kDa            Thioredoxin Reductase 1: 55 kDa            Peroxiredoxin 1: 22 kDa</p>
<b>Tested applications</b>	<b>Suitable for:</b> WB

### Properties

**Storage instructions** Store at -20°C. Please refer to protocols.

Components	200 µl
250X PRX Pathway (TRX, TXNRD1, PRX1) Western Blot Cocktail	1 x 200µl

## Applications

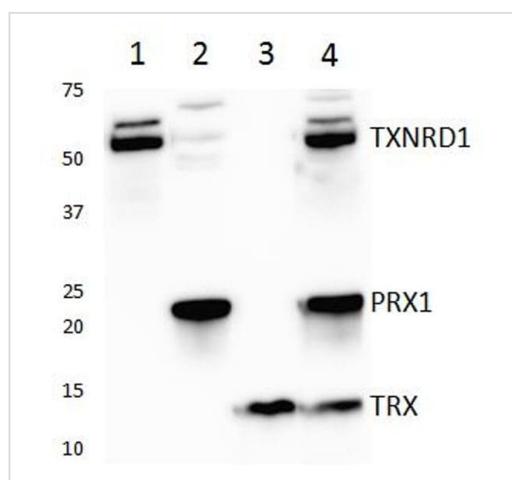
### The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab184868 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		<p>Use at an assay dependent concentration.</p> <p>-WB samples should be heated to 95°C for 10 minutes in sample buffer containing DTT before loading.</p> <p>-Suggested working concentration is 1X for the antibody cocktail.</p> <p>-Suggested incubation buffer is 5% milk in TBS + 0.05% Tween 20.</p>

## Images



All three protein targets resolved separately and in the combined cocktail on HeLa cell lysate.

WB lysate sample was heated at 95°C for 10 minutes before loading. Performed under reducing conditions. All blocking and antibody incubation steps were done in 5% milk in TBST. Developed using the ECL technique.

Exposure time: 1 minute.

Sample: HeLa Cell Lysate – 20 µg/lane

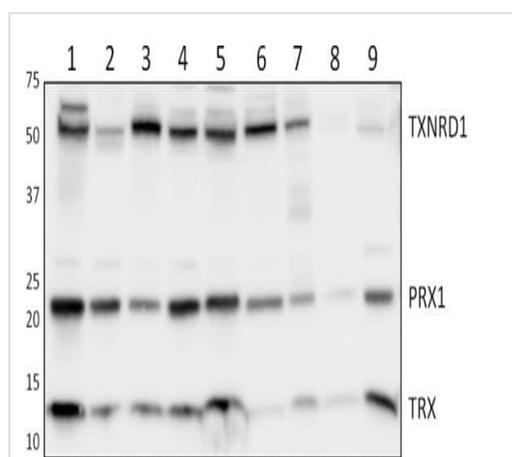
Lane 1: Anti-Thioredoxin Reductase 1 antibody

Lane 2: Anti-Peroxiredoxin 1 antibody

Lane 3: Anti-Thioredoxin antibody

Lane 4: PRX Pathway WB Cocktail

Secondary: HRP-conjugated Anti-Rabbit IgG



Western blot analysis of multiple cell lines using the PRX Pathway Western Blot Cocktail.

The PRX Pathway was used on various cell types to determine the relative amounts of thioredoxin reductase 1, peroxiredoxin 1, and thioredoxin.

All blocking and antibody incubation steps were done in 5% milk in TBST. Developed using the ECL technique.

Exposure time: 1 minute.

20 µg of each cell lysate was loaded per lane after heating for 10 minutes at 95°C.

Lane 1: Hela

Lane 2: HepG2

Lane 3: HDFn

Lane 4: Hek293T

Lane 5: MCF7

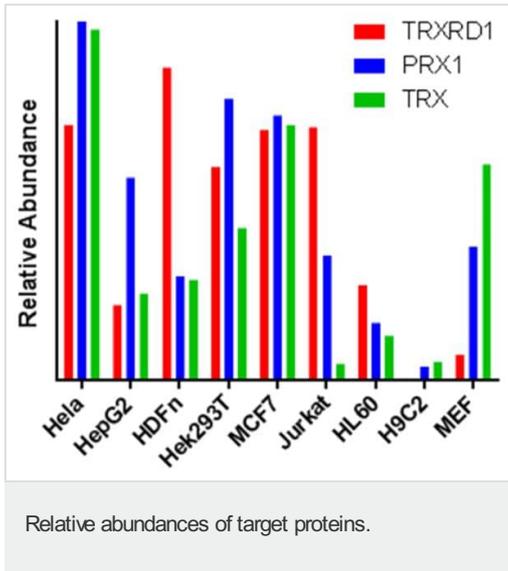
Lane 6: Jurkat

Lane 7: HL60

Lane 8: H9C2

Lane 9: MEF

Secondary: HRP-conjugated Anti-Rabbit IgG



Densitometric analysis of a Western blot obtained with the PRX Pathway WB cocktail using various cell lines to determine the relative amounts of thioredoxin reductase 1, peroxiredoxin 1, and thioredoxin.

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

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