


## Product datasheet

# Anti-Thioredoxin / TRX antibody ab26320

★★★★☆ [5 Abreviews](#) [39 References](#) [5 Images](#)

### Overview

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<b>Product name</b>	Anti-Thioredoxin / TRX antibody
<b>Description</b>	Rabbit polyclonal to Thioredoxin / TRX
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IP, WB, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Human, Chinese hamster <b>Predicted to work with:</b> Mouse, Rat, Sheep, Cow, Cat, Pig 
<b>Immunogen</b>	Synthetic peptide conjugated to KLH derived from within residues 50 to the C-terminus of Human Thioredoxin/ TRX. Read Abcam's proprietary immunogen policy (Peptide available as <a href="#">ab27815</a> .)
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS  Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab26320 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
IP		Use a concentration of 5 µg/ml.
WB	★★★★★ (2)	Use a concentration of 1 µg/ml. Detects a band of approximately 12 kDa (predicted molecular weight: 12 kDa).
ICC/IF	★★★★★ (2)	Use at an assay dependent concentration.

## Target

### Function

Participates in various redox reactions through the reversible oxidation of its active center dithiol to a disulfide and catalyzes dithiol-disulfide exchange reactions. Plays a role in the reversible S-nitrosylation of cysteine residues in target proteins, and thereby contributes to the response to intracellular nitric oxide. Nitrosylates the active site Cys of CASP3 in response to nitric oxide (NO), and thereby inhibits caspase-3 activity. Induces the FOS/JUN AP-1 DNA-binding activity in ionizing radiation (IR) cells through its oxidation/reduction status and stimulates AP-1 transcriptional activity.

ADF augments the expression of the interleukin-2 receptor TAC (IL2R/P55).

### Sequence similarities

Belongs to the thioredoxin family.

Contains 1 thioredoxin domain.

### Post-translational modifications

In the fully reduced protein, both Cys-69 and Cys-73 are nitrosylated in response to nitric oxide (NO). When two disulfide bonds are present in the protein, only Cys-73 is nitrosylated. Cys-73 can serve as donor for nitrosylation of target proteins.

In case of infection, ubiquitinated by S.typhimurium protein slrP, leading to its degradation.

### Cellular localization

Nucleus. Cytoplasm. Secreted. Secreted by a leaderless secretory pathway. Predominantly in the cytoplasm in non irradiated cells. Radiation induces translocation of TRX from the cytoplasm to the nucleus.

## Images



Western blot - Anti-Thioredoxin / TRX antibody (ab26320)

Anti-Thioredoxin / TRX antibody (ab26320) at 1 µg/ml +  
Recombinant human Thioredoxin / TRX protein (Active) ([ab51064](#))  
at 0.01 µg

**Secondary**

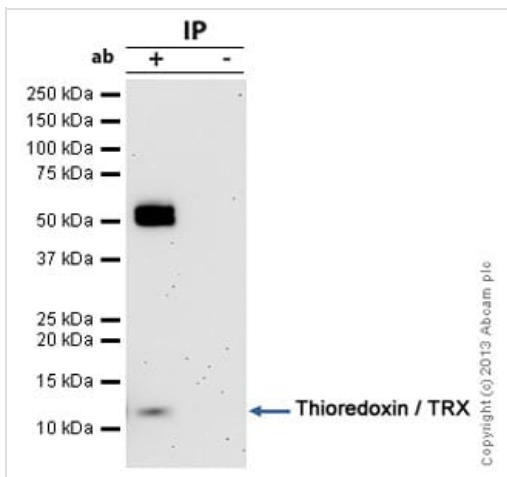
Goat Anti-Rabbit IgG H&L (HRP) preadsorbed ([ab97080](#)) at  
1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 12 kDa

**Exposure time:** 30 seconds



Immunoprecipitation - Anti-Thioredoxin / TRX antibody (ab26320)

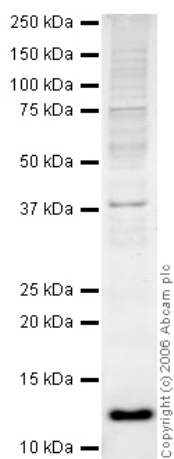
Thioredoxin / TRX was immunoprecipitated using 0.5mg Hela whole cell extract, 5µg of Rabbit polyclonal to Thioredoxin / TRX and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).

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 ab26320.

Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) ([ab99697](#)).

Band: 12kDa; Thioredoxin / TRX



Western blot - Anti-Thioredoxin / TRX antibody (ab26320)

Anti-Thioredoxin / TRX antibody (ab26320) at 1 µg/ml + HeLa whole cell lysate at 20 µg

**Secondary**

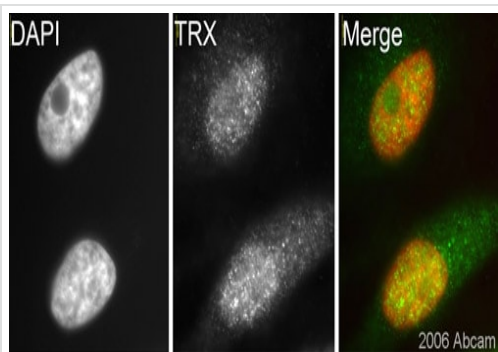
Goat polyclonal to Rabbit IgG (Alexa Fluor® 680) at 1/10000 dilution

Performed under reducing conditions.

**Predicted band size:** 12 kDa

**Observed band size:** 12 kDa

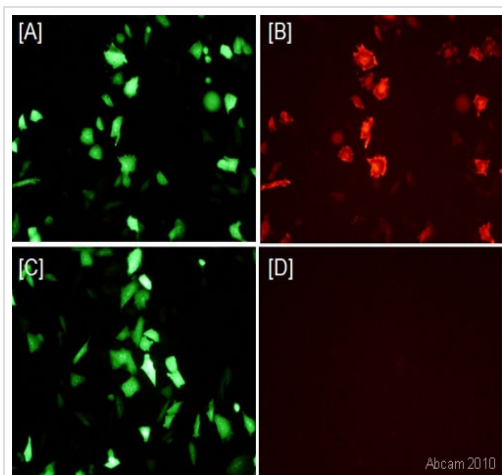
ab26320 detects a band of 12 kDa in HeLa, Jurkat and A431 whole cell lysates. The data for the Jurkat and A431 lysates is not shown.



Immunocytochemistry/ Immunofluorescence - Anti-Thioredoxin / TRX antibody (ab26320)

This image is courtesy of an Abreview submitted by Dr Kirk McManus

ab26320, at 1/200 dilution, staining human TRX in asynchronous HeLa cells by ICC/IF.



Immunocytochemistry/ Immunofluorescence - Anti-Thioredoxin / TRX antibody (ab26320)

This image is courtesy of an abreview submitted by Dr David Tonge, Wolfson CARD, Kings College London

Immunofluorescent detection of Thioredoxin /TRX using antibody ab26320. Chinese Hamster Cell (Ovary cells) were fixed in formaldehyde and permeabilized in 0.1% Triton X in PBS/3% BSA. Primary antibody was incubated at 1/1000 for 1h @ 4°C in PBS containing 3% BSA. Secondary antibody: anti-rabbit conjugated to Alexa Fluor® 568 used @ 1/300. CHO cells co-transfected with plasmids encoding GFP and a mutated form of human thioredoxin which does not enter the nucleus, and labelled using ab26320 (1/1000) and Alexa 568 (1/300). Panel [A] demonstrates GFP immunoreactivity. [B] thioredoxin immunoreactivity; many of the same cells are immunoreactive for both GFP and thioredoxin. Panel [D] thioredoxin primary antibody was omitted, hence there is no immunoreactivity.

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