

Product datasheet

Anti-4 Hydroxynonenal antibody ab46545

★★★★☆ [28 Abreviews](#) [529 References](#) [2 Images](#)

Overview

Product name	Anti-4 Hydroxynonenal antibody
Description	Rabbit polyclonal to 4 Hydroxynonenal
Host species	Rabbit
Specificity	Specifically binds to HNE modified proteins.
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Species independent
Immunogen	Chemical/ Small Molecule corresponding to 4 Hydroxynonenal.
General notes	<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&As</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.09% Sodium azide Constituent: 99.91% PBS
Purification notes	This antibody was purified by an HNE modified Protein-Sepharose affinity column.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab46545 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	★★★★☆ (11)	1/1000.

Target

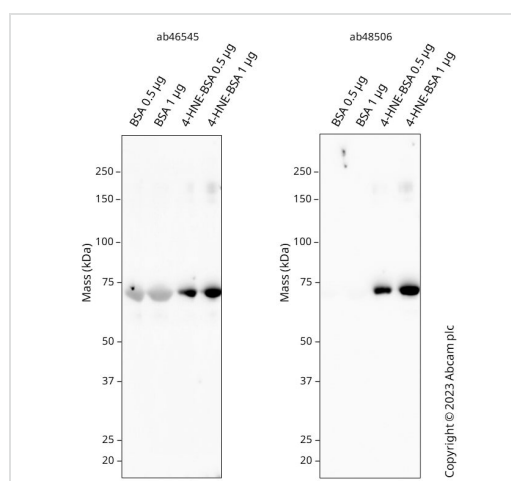
Relevance

Aldehydic products of lipid peroxidation, such as 4 hydroxynonenal (4 HNE), have been implicated in the etiology of pathological changes under oxidative stress as a key mediator of oxidative stress induced cell death. It is a stable product of lipid peroxidation, is proarrhythmic and may contribute to the cytotoxic effects of oxidative stress.

Cellular localization

Cytoplasmic

Images



Western blot - Anti-4 Hydroxynonenal antibody (ab46545)

All lanes : Left: ab46545 at 1/1000 dilution

Right: **ab48506**

Lane 1 : BSA cell lysate at 0.5 µg

Lane 2 : BSA cell lysate at 1 µg

Lane 3 : 4-Hydroxynonenal (BSA) cell lysate at 0.5 µg

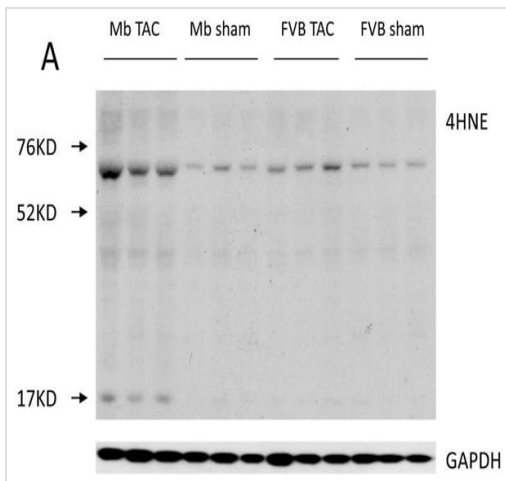
Lane 4 : 4-Hydroxynonenal (BSA) cell lysate at 1 µg

Developed using the ECL technique.

Performed under reducing conditions.

Observed band size: 66 kDa

Western blot: Anti-4-HNE antibody (ab46545) staining at 1/1000 dilution, shown in black. In Western blot, ab46545 binds to 4-HNE but shows some non-specific binding to BSA. We recommend **ab48506** for Western blot of 4-HNE. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3% milk in TBS-0.1% Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times before development with a high-sensitivity ECL substrate kit and imaged with 3 minutes exposure time. Secondary antibodies used were HRP conjugated Goat anti-Rabbit (H+L) at 1/50000 dilution.



Western blot - Anti-4 Hydroxynonenal antibody (ab46545)

Image from Wang J et al., PLoS One. 2013;8(1):e53951. Fig 7(A); doi: 10.1371/journal.pone.0053951. Reproduced under the Creative Commons license <http://creativecommons.org/licenses/by/4.0/>

Frozen mouse cardiac tissue was homogenized with lysis buffer containing 50 mmol/L Tris-HCl (pH7.5), 5 mmol/L EDTA, 10 mmol/L EGTA, 1X cock tail protease inhibitor, 1X alkaline phosphatase inhibitor and 1X acid phosphatase inhibitor, 50 ug/ml phenylmethylsulfonyl fluoride and 1.23 mg/ml Chaps. Extracts were centrifuged at 12,000 rpm at 4°C for 15 minutes. 10 ug of the sample proteins was mixed with loading buffer (40 mmol/L Tris-HCl, pH 6.8, 1% SDS, 50 mmol/L DTT, 7.5% glycerol and 0.003% bromophenol blue and heated at 95°C for 5 minutes, and subjected to electrophoresis on a gradient gel (4% to 12%) at 120V. After electrophoresis, the protein was transferred to a PVDF membrane in a transfer buffer. The PVDF membrane was rinsed briefly in TBS buffer containing 50 mM Tris, 137 mM NaCl, pH 7.5 and blocked in buffer (5% milk with 0.5% BSA in TBST buffer (TBS buffer containing 0.1% tween 20) at room temperature for 1 hour. The membrane was then incubated with rabbit anti 4-hydroxy-2-oneal (4HNE) antibody at 1/3000 dilution at 4°C over night, followed by washing three times. The secondary antibody was incubated with the membrane for another one hour at room temperature. Finally the antigen-antibody complexes were visualized with use of an enhanced chemiluminescence kit. Anti-GAPDH (Abcam) was used for normalizing.

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors