abcam

Product datasheet

Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free ab180844

Recombinant RabMAb

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Overview

Product name	Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free
Description	Rabbit monoclonal [EP1809Y] to Nrf2 (phospho S40) - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), ICC/IF, IHC-P, WB, Dot blot **Unsuitable for:** IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. (Peptide available as **ab133404**)
Positive control	Human breast carcinoma tissue, HepG2 cell lysate
General notes	ab180844 is the carrier-free version of **ab76026**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. 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**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP1809Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab180844 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
Flow Cyt (Intra)		Use at an assay dependent concentration. **ab199376** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		Use at an assay dependent concentration.
IHC-P	★★★★★ (1)	Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Predicted molecular weight: 68 kDa. Can be blocked with Nrf2 (phospho S40) peptide (**ab133404**).
Dot blot		Use at an assay dependent concentration.

Application notes Is unsuitable for IP.

Target

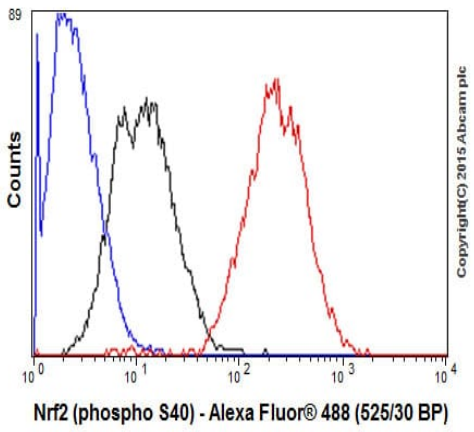
Function Transcription activator that binds to antioxidant response (ARE) elements in the promoter regions of target genes. Important for the coordinated up-regulation of genes in response to oxidative stress. May be involved in the transcriptional activation of genes of the beta-globin cluster by mediating enhancer activity of hypersensitive site 2 of the beta-globin locus control region.

Tissue specificity Widely expressed. Highest expression in adult muscle, kidney, lung, liver and in fetal muscle.

Sequence similarities Belongs to the bZIP family. CNC subfamily.
Contains 1 bZIP domain.

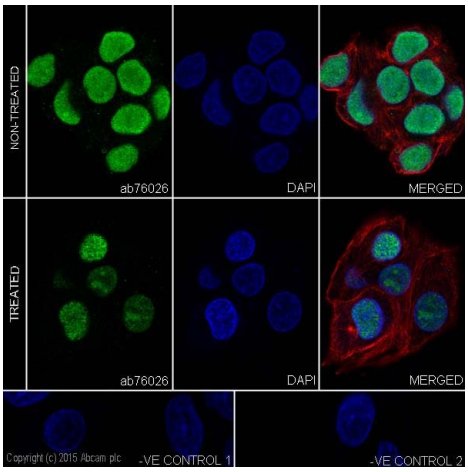
Domain	Acidic activation domain in the N-terminus, and DNA binding domain in the C-terminus.
Post-translational modifications	Phosphorylation of Ser-40 by PKC in response to oxidative stress dissociates NFE2L2 from its cytoplasmic inhibitor KEAP1, promoting its translocation into the nucleus.
Cellular localization	Cytoplasm > cytosol. Nucleus. Cytosolic under unstressed conditions, translocates into the nucleus upon induction by electrophilic agents.

Images



Flow Cytometry (Intracellular) - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

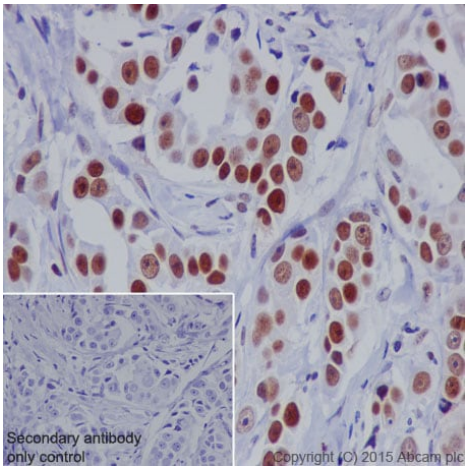
Overlay histogram showing Jurkat cells fixed in 4% PFA and stained with purified **ab76026** at a dilution of 1 in 80 (red line). The secondary antibody used was FITC goat anti-rabbit at a dilution of 1 in 500. Rabbit monoclonal IgG was used as an isotype control (black line) and cells incubated in the absence of both primary and secondary antibody were used as a negative control (blue line). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).



Immunocytochemistry/ Immunofluorescence - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

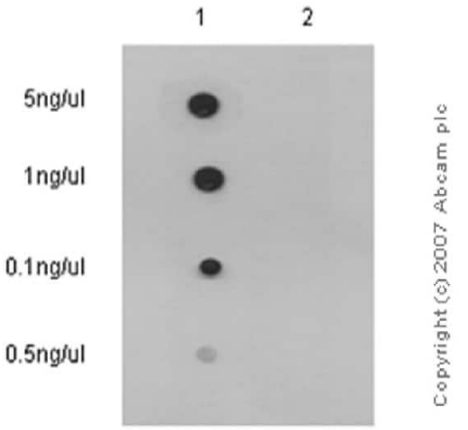
Immunofluorescence staining of HepG2 cells with purified **ab76026** at a working dilution of 1/100, counter-stained with DAPI. The treated cells were treated with alkaline phosphatase for 1 h at 37°C. The secondary antibody was Alexa Fluor® 488 goat anti-rabbit (**ab150077**), used at a dilution of 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 **ab76026** 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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

Immunohistochemical staining of paraffin embedded human breast carcinoma with purified **ab76026** at a working dilution of 1/500. 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 perfomed 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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).



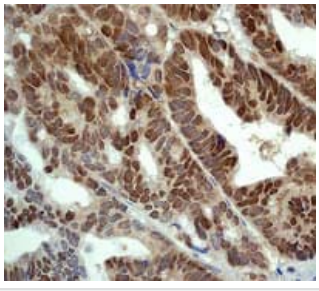
Dot Blot - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

Dot blot analysis of Nrf2 peptides using unpurified **ab76026** at 1/1000 dilution followed by Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated secondary antibody at 1/1000 dilution. Blocking and diluting buffer was 5% NFDM/TBST.

Lane 1: Nrf2 (pS40) phospho peptide

Lane 2: Nrf2 non-phospho peptide

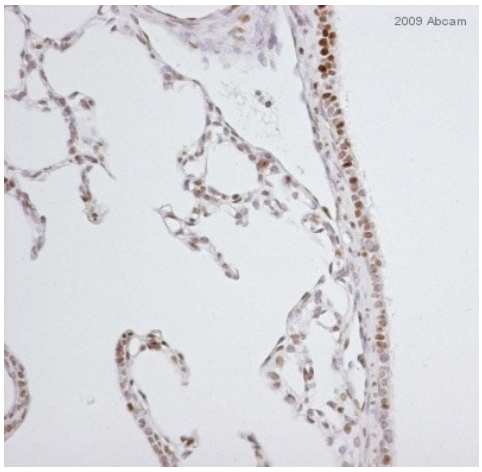
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

Immunohistochemical analysis of paraffin-embedded human breast carcinoma using unpurified **ab76026** at 1/100 dilution. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).

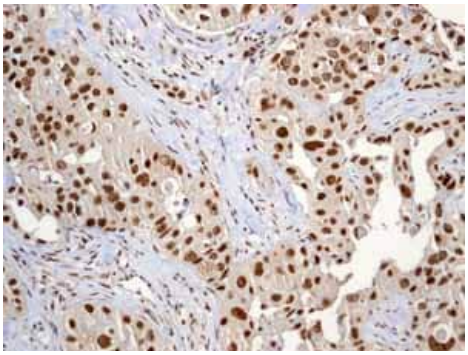


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

This image is courtesy of an anonymous Abreview.

Unpurified **ab76026** staining Nrf2 (phospho S40) in Human normal lung tissue sections by IHC-P (Formaldehyde-fixed paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1% casein for 30 minutes at 4°C. Antigen retrieval was by heat mediation. Samples were incubated with primary antibody (1/50) in 1% casein for 24 hours at 4°C. An undiluted HRP-conjugated Goat polyclonal to rabbit IgG was used as the secondary antibody.

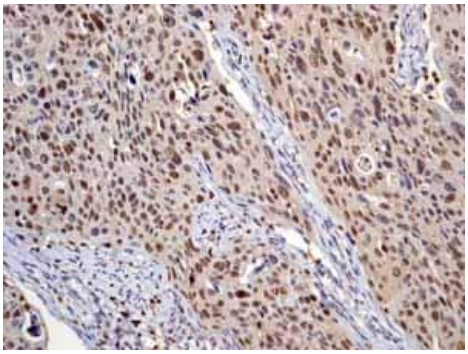
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

Unpurified **ab76026** showing positive staining in Breast carcinoma tissue. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

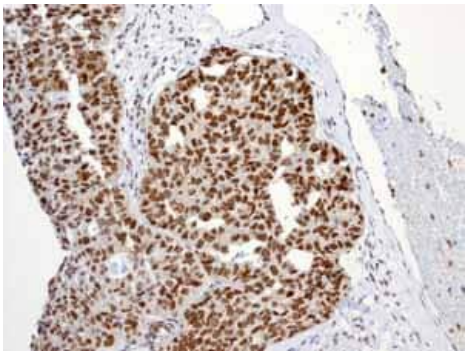
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

Unpurified **ab76026** showing positive staining in Cervical carcinoma tissue. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).

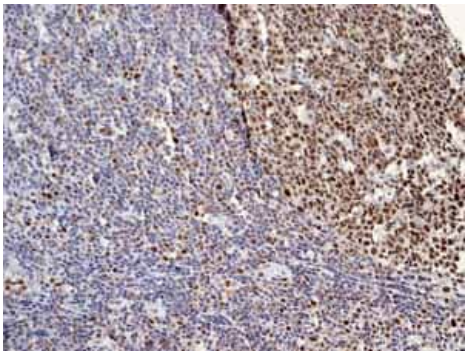


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

Unpurified **ab76026** showing positive staining in Ovarian carcinoma tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

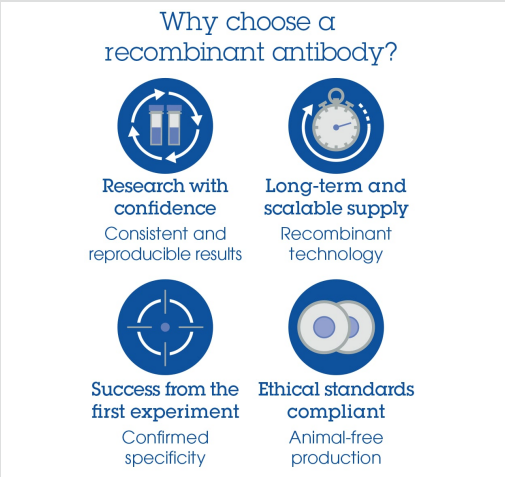


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

Unpurified **ab76026** showing positive staining in Normal tonsil tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76026**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Anti-Nrf2 (phospho S40) antibody [EP1809Y] - BSA and Azide free (ab180844)

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