Product datasheet

Anti-Nrf2 antibody ab31163

Overview

Product name: Anti-Nrf2 antibody
Description: Rabbit polyclonal to Nrf2
Host species: Rabbit
Specificity: Some customers have used this antibody successfully in western blot however our latest tests were unsuccessful and therefore we can no longer guarantee this application. We would recommend ab62352 as an alternative.

Tested applications: Suitable for: IHC-P, ICC/IF, IHC-Fr
Species reactivity: Reacts with: Mouse, Rat, Human
Predicted to work with: Chicken, Cow

Immunogen: Synthetic peptide within Human Nrf2 aa 550 to the C-terminus. The exact sequence is proprietary. Database link: Q16236

Positive control: Placenta

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer: pH: 7.40
Preservative: 0.1% Sodium azide
Constituents: 0.0268% PBS, 1% BSA

Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab31163 in the following tested applications.

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

ab31163 staining Nrf2 in Human lymph node tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and blocked with 10% serum for 1 hour at 20°C; antigen retrieval was by heat mediation in a citric buffer. Samples were incubated with primary antibody (1/100) for 12 hours at 4°C. A Biotin-conjugated Goat anti-rabbit polyclonal (1/200) was used as the secondary antibody.
Immunocytochemistry/ Immunofluorescence - Anti-Nrf2 antibody (ab31163)

ICC/IF image of ab31163 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab31163, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

Immunohistochemistry (Frozen sections) - Anti-Nrf2 antibody (ab31163)

Immunohistochemical analysis of frozen mouse retinal tissue, labelling Nrf2 with ab31163 at a dilution of 1/100 incubated for 2 hours at 21°C. Permeabilization was via addition of 0.5% Triton X-100. Blocking was with 1% BSA for 1 hour at 21°C. The secondary used was ab150086 used at 1/600.
ab31163 staining Nrf2 in Mouse abdominal wall tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 5% serum for 1 hour at 21°C; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/100 in milk) for 18 hours at 4°C. A Biotin-conjugated Goat anti-rabbit IgG polyclonal (1/500) was used as the secondary antibody.

ab31163 at 1/100 dilution, staining Nrf2 in human placenta by Immunohistochemistry (Formalin/PFA fixed paraffin-embedded sections).

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