**Product datasheet**

**Anti-Nrf2 antibody ab137550**

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**Applications**
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

Applications
Our Abpromise guarantee covers the use of ab137550 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<td>IP</td>
<td></td>
<td>1/100 - 1/500.</td>
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<tr>
<td>ChIP</td>
<td></td>
<td>Use at an assay dependent concentration. Assay dependent</td>
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<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration. PubMed: 24846271</td>
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<tr>
<td>WB</td>
<td>★★★★★</td>
<td>1/500 - 1/3000. Detects a band of approximately 110 kDa (predicted molecular weight: 68 kDa).</td>
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<tr>
<td>ICC/IF</td>
<td></td>
<td>1/100 - 1/1000.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★★</td>
<td>1/100 - 1/1000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.</td>
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PubMed: 24846271
Western blot - Anti-Nrf2 antibody (ab137550)

**All lanes**: Anti-Nrf2 antibody (ab137550) at 1/1000 dilution

**Lane 1**: Untreated (-) MDA-MB-231 nuclear extract

**Lane 2**: MDA-MB-231 nuclear extract treated with 30 µM tBHQ for 4 hours (+)

Lysates/proteins at 30 µg per lane.

**Secondary**

**All lanes**: Rabbit IgG antibody (HRP) at 1/10000 dilution

Developed using the ECL technique.

**Observed band size**: 110 kDa

*why is the actual band size different from the predicted?*

7.5% gel.

Running condition: 80V, 15min; 140V, 40min.

Transfer condition: Semi-dry, 18 V, 60min (Nitrocellulose membrane)

Blocking condition: 5% non-fat milk in TBST, RT, 60min.

Primary antibody incubation: 4°C overnight.

Secondary antibody incubation: Room temperature for 1 hour.

Washing condition: 5 ml TBST, 4 x 5min.

ECL detection.
**Immunocytochemistry/ Immunofluorescence - Anti-Nrf2 antibody (ab137550)**

ab137550 staining Nrf2 in HeLa cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% paraformaldehyde. Samples were incubated with primary antibody diluted at 1/500 (green). Phalloidin, a cytoskeleton marker, diluted at 1/100 (red) was used.

ChiP was performed with HepG2 chromatin extract and 5 μg of either normal rabbit IgG or Anti-Nrf2 antibody (ab137550). The precipitated DNA was detected by PCR with primer set targeting to GCLC gene locus.

**ChIP - Anti-Nrf2 antibody (ab137550)**

ab137550 staining Nrf2 in Rat liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/250 in BSA in TBS) for 30 minutes. A undiluted HRP-conjugated Goat anti-rabbit polyclonal was used as the secondary antibody.

**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nrf2 antibody (ab137550)**  
Image is courtesy of an anonymous abreview
All lanes: Anti-Nrf2 antibody (ab137550) at 1/1000 dilution

Lane 1: Non-transfected (-) 293T whole cell extracts
Lane 2: NRF2-transfected (+, including 3xFlag-tag) 293T whole cell extracts

Lysates/proteins at 30 µg per lane.

Secondary
All lanes: HRP-conjugated anti-rabbit IgG antibody

Observed band size: 110 kDa. Why is the actual band size different from the predicted?

5% SDS-PAGE

ab137550 at 5 µg immunoprecipitating Nrf2 in HepG2 whole cell extracts.

Lane 1 (-): Ctrl IgG instead of ab137550 in HepG2 whole cell extracts.
Lane 2 (+): ab137550 + HepG2 whole cell extracts.

For western blotting an anti-Rabbit IgG was used as a secondary reagent.
**Immunocytochemistry/Immunofluorescence - Anti-Nrf2 antibody (ab137550)**

Immunocytochemistry/immunofluorescence analysis of NIH/3T3 cells labeling Nrf2 with ab137550 at 1/500 dilution (green). Cells were fixed in 4% paraformaldehyde at RT for 15 min. Hoechst nuclear staining (blue). Shows cytoplasmic and nuclear staining.

**Western blot - Anti-Nrf2 antibody (ab137550)**

Anti-Nrf2 antibody (ab137550) at 1/500 dilution + C8D30 whole cell extract at 30 µg

**Secondary**

HRP-conjugated anti-rabbit IgG antibody

**Observed band size:** 110 kDa. *Why is the actual band size different from the predicted?*

5% SDS-PAGE

**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nrf2 antibody (ab137550)**

Immunohistochemical analysis of paraffin-embedded Cal27 xenograft, labeling Nrf2 with ab137550 at 1/500 dilution.

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