

# Nrf2 (H-10): sc-518036

## BACKGROUND

The NF-E2 DNA binding protein is composed of two subunits, p45 and MafK. It regulates expression of globin genes in developing erythroid cells through interaction with Maf recognition elements (Mares). A family of NF-E2-related proteins, which are collectively known as the Cap "n" collar (CNC) family and include Nrf1 (also designated TCF11), Nrf2 and Nrf3, are bZIP transcription factors that heterodimerize with Maf proteins to bind Maf sequences. The Nrf proteins also bind the antioxidant response element (ARE) and are implicated in the regulation of detoxification enzymes and the oxidative stress response. They do so by heterodimerizing with Jun family members (c-Jun, Jun B and Jun D) to activate gene expression, specifically the detoxifying enzyme NQO1. Nrf2 is widely expressed and is thought to translocate to the nucleus after treatment with xenobiotics and antioxidants, which stimulate its release from its repressor protein, Keap1.

## CHROMOSOMAL LOCATION

Genetic locus: NFE2L2 (human) mapping to 2q31.2.

## SOURCE

Nrf2 (H-10) is a mouse monoclonal antibody raised against amino acids 37-336 of Nrf2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-518036 X, 200 µg/0.1 ml.

Nrf2 (H-10) is available conjugated to agarose (sc-518036 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518036 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518036 PE), fluorescein (sc-518036 FITC), Alexa Fluor® 488 (sc-518036 AF488), Alexa Fluor® 546 (sc-518036 AF546), Alexa Fluor® 594 (sc-518036 AF594) or Alexa Fluor® 647 (sc-518036 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518036 AF680) or Alexa Fluor® 790 (sc-518036 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Nrf2 (H-10) is recommended for detection of Nrf2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Nrf2 siRNA (h): sc-37030, Nrf2 shRNA Plasmid (h): sc-37030-SH and Nrf2 shRNA (h) Lentiviral Particles: sc-37030-V.

Nrf2 (H-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of Nrf2 isoforms: 68/66/65 kDa.

Molecular Weight (observed) of Nrf2: 61 kDa.

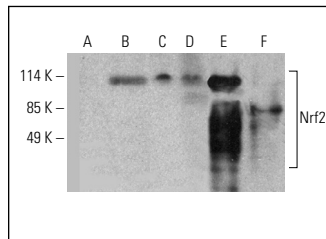
Molecular Weight of poly-ubiquitinated Nrf2: 100 kDa.

Positive Controls: Nrf2 (h): 293T Lysate: sc-177641.

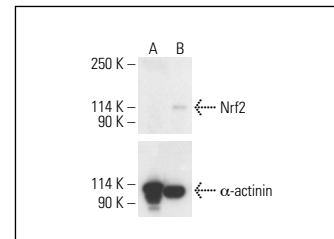
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



Nrf2 (H-10): sc-518036. Western blot analysis of Nrf2 expression in non-transfected 293T: sc-117752 (A), human Nrf2 transfected 293T: sc-177641 (B), U2-OS (C) and U2-OS + MG 132 (D) whole cell lysates and human recombinant Nrf2 (E, F).



Nrf2 (H-10): sc-518036. Western blot analysis of Nrf2 expression in untreated (A) and chemically-treated (B) A549 whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409. α-actinin (H-2): sc-17829 used as loading control. Detection reagent used: m-IgG<sub>1</sub> BP-HRP: sc-525408.

## SELECT PRODUCT CITATIONS

- Bao, B., et al. 2019. Sulforaphane prevents PC12 cells from oxidative damage via the Nrf2 pathway. *Mol. Med. Rep.* 19: 4890-4896.
- Ferrari, M., et al. 2020. Dengue virus targets Nrf2 for NS2B3-mediated degradation leading to enhanced oxidative stress and viral replication. *J. Virol.* 94: e01551-20.
- Monteiro-Alfredo, T., et al. 2021. Hypoglycaemic and antioxidant properties of *Acrocomia aculeata* (Jacq.) Lodd Ex Mart. extract are associated with better vascular function of type 2 diabetic rats. *Nutrients* 13: 2856.
- Jang, S., et al. 2022. Dimethyl itaconate reduces α-MSH-induced pigmentation via modulation of Akt and p38 MAPK signaling pathways in B16F10 mouse melanoma cells. *Molecules* 27: 4183.
- Ahmed, N., et al. 2022. Arabic gum could alleviate the Aflatoxin B1-provoked hepatic injury in rat: the involvement of oxidative stress, inflammatory, and apoptotic pathways. *Toxins* 14: 605.
- Park, C., et al. 2023. Fisetin protects C2C12 mouse myoblasts from oxidative stress-induced cytotoxicity through regulation of the Nrf2/HO-1 signaling. *J. Microbiol. Biotechnol.* 33: 591-599.
- Somayajulu, M., et al. 2024. Mechanisms of PM<sub>10</sub> disruption of the Nrf2 pathway in cornea. *Int. J. Mol. Sci.* 25: 3754.
- Park, C., et al. 2024. Activation of heme oxygenase-1 by mangiferin in human retinal pigment epithelial cells contributes to blocking oxidative damage. *Biomol. Ther.* 32: 329-340.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA