

Nrf2 (H-6): sc-518033



The Power to Question

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-6) is a mouse monoclonal antibody raised against amino acids 37-336 of Nrf2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-518033 X, 200 µg/0.1 ml.

Nrf2 (H-6) is available conjugated to agarose (sc-518033 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518033 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518033 PE), fluorescein (sc-518033 FITC), Alexa Fluor® 488 (sc-518033 AF488), Alexa Fluor® 546 (sc-518033 AF546), Alexa Fluor® 594 (sc-518033 AF594) or Alexa Fluor® 647 (sc-518033 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518033 AF680) or Alexa Fluor® 790 (sc-518033 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Nrf2 (H-6) 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-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

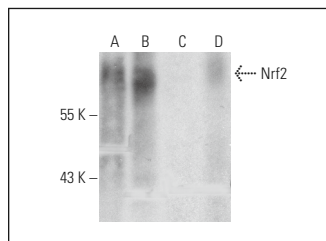
Molecular Weight (observed) of Nrf2: 61 kDa.

Molecular Weight of poly-ubiquitinated Nrf2: 100 kDa.

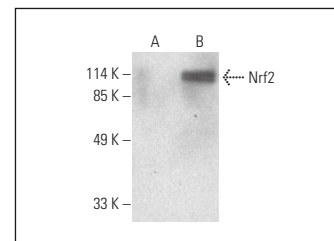
STORAGE

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

DATA



Nrf2 (H-6): sc-518033. Western blot analysis of Nrf2 expression in human recombinant Nrf2 from Prospec Bio (A), human recombinant Nrf2 from Advanced Biomart (B), Jurkat (C) and Jurkat + MG-132 (D) whole cell lysates.



Nrf2 (H-6): sc-518033. Western blot analysis of Nrf2 expression in non-transfected: sc-117752 (A) and human Nrf2 transfected: sc-177641 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Liu, J., et al. 2018. Alantolactone induces apoptosis and suppresses migration in MCF7 human breast cancer cells via the p38 MAPK, NFκB and Nrf2 signaling pathways. *Int. J. Mol. Med.* 42: 1847-1856.
- Cao, X.Y., et al. 2019. The protective effects of a novel polysaccharide from *Lentinus edodes* mycelia on islet β (INS-1) cells damaged by glucose and its transportation mechanism with human serum albumin. *Int. J. Biol. Macromol.* 134: 344-353.
- Wei, X., et al. 2020. Ethyl acetate extract of herpetospermum pedunculatum alleviates α-naphthylisothiocyanate-induced cholestasis by activating the farnesoid x receptor and suppressing oxidative stress and inflammation in rats. *Phytomedicine* 76: 153257.
- Liu, R., et al. 2020. GPR120 agonist GW9508 ameliorated cellular senescence induced by ox-LDL. *ACS Omega* 5: 32195-32202.
- Lee, H.S. and Jeong, G.S. 2021. 6,7,4'-trihydroxyflavone mitigates methamphetamine-induced neurotoxicity in SH-SY5y cells via Nrf2/Heme Oxygenase-1 and PI3K/Akt/mTOR signaling pathways. *Molecules* 26: 2442.
- Wijaya, L.S., et al. 2022. Stimulation of *de novo* glutathione synthesis by nitrofurantoin for enhanced resilience of hepatocytes. *Cell Biol. Toxicol.* 38: 847-864.
- Zhang, Z., et al. 2022. Inhibition of NPC1L1 disrupts adaptive responses of drug-tolerant persister cells to chemotherapy. *EMBO Mol. Med.* 14: e14903.
- Salerno, L., et al. 2024. Evaluation of the anticancer effects exerted by 5-fluorouracil and heme oxygenase-1 inhibitor hybrids in HTC116 colorectal cancer cells. *J. Enzyme Inhib. Med. Chem.* 39: 2337191.

RESEARCH USE

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

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