

Nrf2 (H-300): sc-13032

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 Mare 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; Nfe2l2 (mouse) mapping to 2 C3.

SOURCE

Nrf2 (H-300) is a rabbit polyclonal antibody raised against amino acids 37-336 of Nrf2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13032 X, 200 µg/0.1 ml.

APPLICATIONS

Nrf2 (H-300) is recommended for detection of Nrf2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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). Nrf2 (H-300) is also recommended for detection of Nrf2 in additional species, including canine, bovine and porcine. Nrf2 (H-300) is also recommended for detection of Nrf2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Nrf2 siRNA (h): sc-37030, Nrf2 siRNA (m): sc-37049, Nrf2 shRNA Plasmid (h): sc-37030-SH, Nrf2 shRNA Plasmid (m): sc-37049-SH, Nrf2 shRNA (h) Lentiviral Particles: sc-37030-V and Nrf2 shRNA (m) Lentiviral Particles: sc-37049-V.

Nrf2 (H-300) 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.

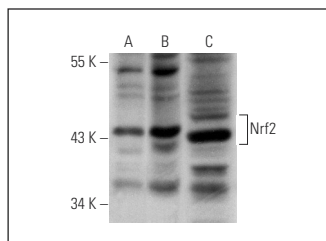
Molecular Weight of Nrf2 poly-ubiquitinated: 100 kDa.

Positive Controls: Nrf2 (m): 293T Lysate: sc-127242.

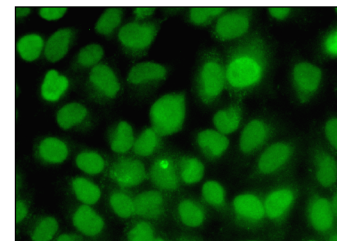
STORAGE

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

DATA



Nrf2 (H-300): sc-13032. Western blot analysis of Nrf2 expression in non-transfected 293T: sc-117752 (A), mouse Nrf2 transfected 293T: sc-127242 (B) and Jurkat (C) whole cell lysates.



Nrf2 (H-300): sc-13032. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School.

SELECT PRODUCT CITATIONS

- Bloom, D.A., et al. 2003. Phosphorylation of Nrf2 at Ser40 by protein kinase C in response to antioxidants leads to the release of Nrf2 from Irf2, but is not required for Nrf2 stabilization/accumulation in the nucleus and transcriptional activation of antioxidant response element-mediated NAD(P)H:quinone oxidoreductase-1 gene expression. *J. Biol. Chem.* 278: 44675-44682.
- Ray, P.D., et al. 2015. Coordinated regulation of Nrf2 and histone H3 serine 10 phosphorylation in arsenite-activated transcription of the human heme oxygenase-1 gene. *Biochim. Biophys. Acta* 1849: 1277-1288.
- Lampiasi, N. and Montana, G. 2015. The molecular events behind ferulic acid mediated modulation of IL-6 expression in LPS-activated Raw 264.7 cells. *Immunobiology* 221: 486-493.
- Egea, J., et al. 2015. Melatonin-sulforaphane hybrid ITH12674 induces neuroprotection in oxidative stress conditions by a "drug-prodrug" mechanism of action. *Br. J. Pharmacol.* 172: 1807-1821.
- Soeur, J., et al. 2015. Skin resistance to oxidative stress induced by resveratrol: from Nrf2 activation to GSH biosynthesis. *Free Radic. Biol. Med.* 78: 213-223.

RESEARCH USE

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



Try **Nrf2 (A-10): sc-365949** or **Nrf2 (437C2a): sc-81342**, our highly recommended monoclonal alternatives to Nrf2 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Nrf2 (A-10): sc-365949**.