

Nrf2 (A-10): sc-365949

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 (A-10) 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-365949 X, 200 µg/0.1 ml.

Nrf2 (A-10) is available conjugated to agarose (sc-365949 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365949 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365949 PE), fluorescein (sc-365949 FITC), Alexa Fluor® 488 (sc-365949 AF488), Alexa Fluor® 546 (sc-365949 AF546), Alexa Fluor® 594 (sc-365949 AF594) or Alexa Fluor® 647 (sc-365949 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365949 AF680) or Alexa Fluor® 790 (sc-365949 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Nrf2 (A-10) is recommended for detection of ~60 kDa forms 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 (A-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

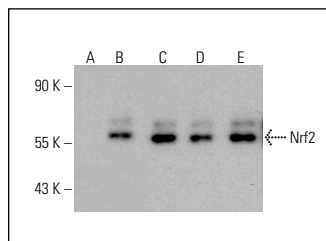
Molecular Weight (observed) of Nrf2: 61 kDa.

Molecular Weight of poly-ubiquitinated Nrf2: 100 kDa.

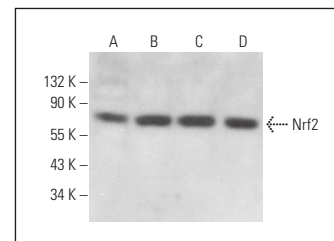
STORAGE

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

DATA



Nrf2 (A-10): sc-365949. Western blot analysis of Nrf2 expression in non-transfected: sc-117752 (A), human Nrf2 transfected: sc-177641 (B), sc-177642 (C), sc-177643 (D) and sc-369547 (E) 293T whole cell lysates.



Nrf2 (A-10): sc-365949. Western blot analysis of Nrf2 expression in HeLa (A), HEL 92.1.7 (B), K-562 (C) and Y79 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Pan, L.L., et al. 2013. A novel compound derived from danshensu inhibits apoptosis via upregulation of heme oxygenase-1 expression in SH-SY5Y cells. *Biochim. Biophys. Acta* 1830: 2861-2871.
- Boylston, J.A., et al. 2014. A knockdown with smoke model reveals FHIT as a repressor of Heme Oxygenase 1. *Cell Cycle* 13: 2913-2930.
- Kawasaki, Y., et al. 2015. Clinicopathological significance of nuclear factor (erythroid-2)-related factor 2 (Nrf2) expression in gastric cancer. *BMC cancer* 15: 5.
- Yan, L., et al. 2016. Emodin mitigates the oxidative stress induced by cisplatin in osteosarcoma MG63 cells. *Oncol. Lett.* 12: 1981-1985.
- Fernández-Moriano, C., et al. 2017. Evaluation of the adaptogenic potential exerted by ginsenosides Rb1 and Rg1 against oxidative stress-mediated neurotoxicity in an *in vitro* neuronal model. *PLoS ONE* 12: e0182933.
- Adams, O., et al. 2018. A specific expression profile of LC3B and p62 is associated with nonresponse to neoadjuvant chemotherapy in esophageal adenocarcinomas. *PLoS ONE* 13: e0197610.
- Beinse, G., et al. 2019. The Nrf2 transcriptional target NQO1 has low mRNA levels in TP53-mutated endometrial carcinomas. *PLoS ONE* 14: e0214416.
- Ciotti, S., et al. 2020. GSK3β is a key regulator of the ROS-dependent necrotic death induced by the quinone DMNQ. *Cell Death Dis.* 11: 2.
- Liu, Y., et al. 2020. TRIM25 promotes the cell survival and growth of hepatocellular carcinoma through targeting Keap1-Nrf2 pathway. *Nat. Commun.* 11: 348.

RESEARCH USE

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

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