

# Nrf2 (T-19): sc-30915

## 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; Nfe2l2 (mouse) mapping to 2 C3.

## SOURCE

Nrf2 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-30915 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Nrf2 (T-19) 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 (T-19) is also recommended for detection of Nrf2 in additional species, including 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.

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: Jurkat whole cell lysate: sc-2204 or THP-1 nuclear extract: sc-24963.

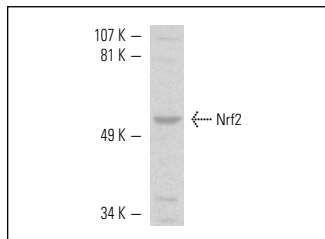
## RESEARCH USE

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

## STORAGE

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

## DATA



Nrf2 (T-19): sc-30915. Western blot analysis of Nrf2 expression in THP-1 nuclear extract.

## SELECT PRODUCT CITATIONS

- Pi, J., et al. 2007. Molecular mechanism of human Nrf2 activation and degradation: role of sequential phosphorylation by protein kinase CK2. *Free Radic. Biol. Med.* 42: 1797-1806.
- Singh, B., et al. 2011. Induction of NAD(P)H-quinone oxidoreductase 1 by antioxidants in female ACI rats is associated with decrease in oxidative DNA damage and inhibition of estrogen-induced breast cancer. *Carcinogenesis* 33: 156-163.
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- Liu, J., et al. 2013. Oleanolic acid alters bile acid metabolism and produces cholestatic liver injury in mice. *Toxicol. Appl. Pharmacol.* 272: 816-824.
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- Reisman, S.A., et al. 2014. Topical application of the synthetic triterpenoid RTA 408 activates Nrf2 and induces cytoprotective genes in rat skin. *Arch. Dermatol. Res.* 306: 447-454.
- Rizvi, F., et al. 2015. Suppression in PHLPP2 induction by morin promotes Nrf2-regulated cellular defenses against oxidative injury to primary rat hepatocytes. *Redox Biol.* 6: 587-598.

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