Nuclear respiratory factor-1 (NRF-1) is a transcriptional activator that has been implicated in the nuclear control of respiratory chain expression in mammalian cells. The NRF-1 gene is expressed during oogenesis and during the early stages of embryogenesis. In vitro studies have implicated NRF-1 in the transcriptional expression of nuclear genes required for mitochondrial respiratory function, as well as for other fundamental cellular activities. While most isolated wild-type and NRF-1 +/- blastocysts continue to develop normally in vitro, NRF-1 +/- blastocysts lack this ability, despite their normal morphology. NRF-1 is specifically required in the maintenance of mtDNA and respiratory chain function during early embryogenesis. NRF-1 also plays a key role in cellular adaptation to energy demands by translating physiological signals into an increased capacity for generating energy. Additionally, NRF-1 is a major transcription factor that binds the promoter in brain and testis.

**CHROMOSOMATIC LOCATION**

Genetic locus: NRF1 (human) mapping to 7q32.2; Nrf1 (mouse) mapping to 6 A3.3.

**SOURCE**

NRF-1 (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NRF-1 of mouse 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-23624 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-23624 AC, 500 µg/0.25 ml agarose in 1 ml.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-23624 X, 200 µg/0.1 ml.

**APPLICATIONS**

NRF-1 (A-19) is recommended for detection of NRF-1 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). NRF-1 (A-19) is also recommended for detection of NRF-1 in additional species, including equine, canine and avian.

Suitable for use as control antibody for NRF-1 siRNA (h): sc-38105, NRF-1 siRNA (m): sc-38106, NRF-1 shRNA Plasmid (h): sc-38105-SH, NRF-1 shRNA Plasmid (m): sc-38106-SH, NRF-1 shRNA (h) Lentiviral Particles: sc-38105-V and NRF-1 shRNA (m) Lentiviral Particles: sc-38106-V.

NRF-1 (A-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NRF-1: 68 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188.