

# NIFK (T-14): sc-107819

## BACKGROUND

The structural proteins for the complex metalloenzyme nitrogenase include NIFK, NIFD and NIFH. These proteins are all necessary for archaeal and bacterial nitrogen fixation. The NIFK gene encodes the  $\beta$  subunit of the nitrogenase molybdenum-iron (MoFe) tetramer. NIFK localizes to the nucleolus where it interacts with the fork-head associated domain of the proliferation marker protein Ki-67 in a mitosis-specific and phosphorylation-dependent manner. NIFK is widely expressed in adult tissues, suggesting other functions in addition to its interaction with Ki-67, which is only expressed in proliferating cells.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: MKI67IP (human) mapping to 2q14.3; Mki67ip (mouse) mapping to 1 E2.3.

## SOURCE

NIFK (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NIFK of mouse origin.

## STORAGE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107819 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NIFK (T-14) is recommended for detection of NIFK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 NIFK siRNA (h): sc-72013, NIFK siRNA (m): sc-149974, NIFK shRNA Plasmid (h): sc-72013-SH, NIFK shRNA Plasmid (m): sc-149974-SH, NIFK shRNA (h) Lentiviral Particles: sc-72013-V and NIFK shRNA (m) Lentiviral Particles: sc-149974-V.

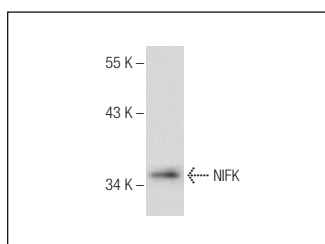
Molecular Weight of NIFK: 36 kDa.

Positive Controls: BJAB nuclear extract: sc-2145, HeLa whole cell lysate: sc-2200 or Ramos cell lysate: sc-2216.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



NIFK (T-14): sc-107819. Western blot analysis of NIFK expression in HeLa whole cell lysate.

## RESEARCH USE

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