

NIFK (4H213): sc-71701

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 β subunit of the nitrogenase molybdenum-iron (MoFe) tetramer. NIFK localizes to the nucleolus, where it interacts with the forkhead 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.

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CHROMOSOMAL LOCATION

Genetic locus: MKI67IP (human) mapping to 2q14.3.

SOURCE

NIFK (4H213) is a mouse monoclonal antibody raised against amino acids 100-200 of NIFK of human 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 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NIFK (4H213) is recommended for detection of NIFK of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for NIFK siRNA (h): sc-72013, NIFK shRNA Plasmid (h): sc-72013-SH and NIFK shRNA (h) Lentiviral Particles: sc-72013-V.

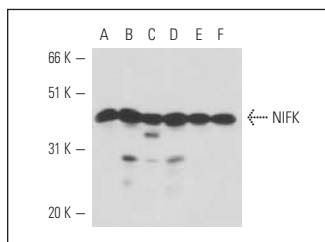
Molecular Weight of NIFK: 36 kDa.

Positive Controls: NIFK (h): 293T Lysate: sc-113984, BJAB nuclear extract: sc-2145 or NIFK (h3): 293T Lysate: sc-170742.

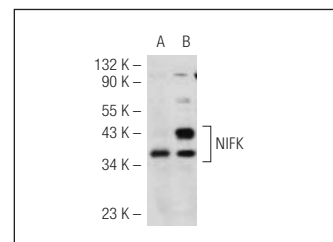
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA



NIFK (4H213): sc-71701. Western blot analysis of NIFK expression in BJAB (A), Ramos (B), HeLa (C), CCRF-CEM (D), HEL 92.1.7 (E) and K-562 (F) nuclear extracts.



NIFK (4H213): sc-71701. Western blot analysis of NIFK expression in non-transfected: sc-117752 (A) and human NIFK transfected: sc-170742 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.