SANTA CRUZ BIOTECHNOLOGY, INC.

NIRF (T-18): sc-54252

BACKGROUND

NIRF (Np95/ICBP90-like RING finger protein), also known as E3 ubiquitin-protein ligase UHRF2, nuclear zinc finger protein Np97 or RING finger protein 107, is a nuclear protein involved in cell cycle regulation. NIRF contains a PHD finger, two RING fingers, a ubiquitin-like domain and a YDG/SRA domain. It shares high structural homology with UHRF1 (also called ICBP90 in humans and Np95 in mice), however, in contrast to UHRF1, NIRF acts as a negative regulator of cell proliferation. It associates with the Cdk2-cyclin complex in its dephosphorylated form and induces G_1 arrest. NIRF plays an important role in the regulation of the G_1/S transition by blocking cell entry into the S phase. While associated with Cdk2, NIRF becomes phosphorylated. NIRF can also act as a ubiquitin ligase and it ubiquitinates PCNP. In addition, NIRF can recruit and bind HDAC1 via its SRA domain. The overexpression of NIRF results in an increase of G_1 phase cells.

REFERENCES

1. Mori, T., Li, Y., Hata, H., Ono, K. and Kochi, H. 2002. NIRF, a novel RING finger protein, is involved in cell-cycle regulation. Biochem. Biophys. Res. Commun. 296: 530-536.
2. Li, Y., Mori, T., Hata, H., Homma, Y. and Kochi, H. 2004. NIRF induces G_1 arrest and associates with Cdk2. Biochem. Biophys. Res. Commun. 319: 464-468.
3. Mori, T., Li, Y., Hata, H. and Kochi, H. 2004. NIRF is a ubiquitin ligase that is capable of ubiquitinating PCNP, a PEST-containing nuclear protein. FEBS Lett. 557: 209-214.
4. Unoki, M., Nishidate, T. and Nakamura, Y. 2004. ICBP90, an E2F-1 target, recruits HDAC1 and binds to methyl-CpG through its SRA domain. Oncogene 23: 7601-7610.
5. Abbady, A.Q., Bronner, C., Bathami, K., Muller, C.D., Jeanblanc, M., Mathieu, E., Klein, J.P., Candolfi, E. and Mousli, M. 2005. TCR pathway involves ICBP90 gene down-regulation via E2F binding sites. Biochem. Pharmacol. 70: 570-579.

CHROMOSOMAL LOCATION

Genetic locus: UHRF2 (human) mapping to 9p24.1; Uhrf2 (mouse) mapping to 19 C1.

SOURCE

NIRF (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NIRF 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-54252 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-54252 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NIRF (T-18) is recommended for detection of NIRF 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).

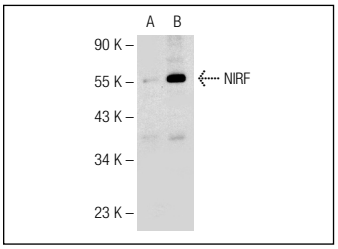
Suitable for use as control antibody for NIRF siRNA (h): sc-72380, NIRF siRNA (m): sc-72381, NIRF shRNA Plasmid (h): sc-72380-SH, NIRF shRNA Plasmid (m): sc-72381-SH, NIRF shRNA (h) Lentiviral Particles: sc-72380-V and NIRF shRNA (m) Lentiviral Particles: sc-72381-V.

NIRF (T-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NIRF: 90 kDa.

Positive Controls: NIRF (h): 293 Lysate: sc-170276.

DATA



NIRF (T-18): sc-54252. Western blot analysis of NIRF expression in non-transfected: sc-110760 (**A**) and human NIRF transfected: sc-170276 (**B**) 293 whole cell lysates.

STORAGE

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

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.