

NIRF (L-22): sc-133822

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 G₁ arrest. NIRF plays an important role in the regulation of the G₁/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 G₁ phase cells.

REFERENCES

- 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.
- Li, Y., Mori, T., Hata, H., Homma, Y. and Kochi, H. 2004. NIRF induces G₁ arrest and associates with Cdk2. *Biochem. Biophys. Res. Commun.* 319: 464-468.
- 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.
- 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.
- Abbadly, A.O., 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.

SOURCE

NIRF (L-22) is an affinity purified rabbit polyclonal antibody raised against synthetic NIRF peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

NIRF (L-22) is recommended for detection of NIRF of 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), immunohistochemistry (including paraffin-embedded sections) (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 shRNA Plasmid (h): sc-72380-SH and NIRF shRNA (h) Lentiviral Particles: sc-72380-V.

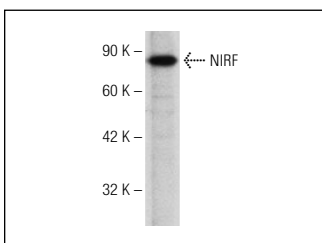
Molecular Weight of NIRF: 90 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



NIRF (L-22): sc-133822. Western blot analysis of NIRF expression in Jurkat whole cell lysate.

RESEARCH USE

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

MONOS
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Try **NIRF (C-10): sc-398953**, our highly recommended monoclonal alternative to NIRF (L-22).