

# NKRF (E-12): sc-365568

## BACKGROUND

NKRF (NFκB repressing factor), also known as transcription factor NRF or ITBA4 protein, is a ubiquitously expressed silencer protein. It localizes to the nucleoli but is also found in the nucleoplasm and contains one of each of the following nucleic acid binding domains: G-patch and R3H. NKRF represses the basal transcription of IFN-β, IL-8 and NOS2 by directly binding to their promoters. NKRF also binds to negative regulatory elements (NREs) and directly interacts with NFκB via its N-terminus. NKRF specifically inhibits the transcriptional activity of the NFκB proteins. In addition, NKRF contains a 5' untranslated region (UTR) that has internal ribosome entry segment (IRES) activity. The activity of the NKRF IRES module is decreased with the down regulation of the RNA-binding protein, JKTBP1.

## CHROMOSOMAL LOCATION

Genetic locus: NKRF (human) mapping to Xq24; Nkrf (mouse) mapping to X A3.3.

## SOURCE

NKRF (E-12) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of NKRF of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NKRF (E-12) is available conjugated to agarose (sc-365568 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365568 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365568 PE), fluorescein (sc-365568 FITC), Alexa Fluor® 488 (sc-365568 AF488), Alexa Fluor® 546 (sc-365568 AF546), Alexa Fluor® 594 (sc-365568 AF594) or Alexa Fluor® 647 (sc-365568 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365568 AF680) or Alexa Fluor® 790 (sc-365568 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

NKRF (E-12) is recommended for detection of NKRF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 NKRF siRNA (h): sc-72275, NKRF siRNA (m): sc-72276, NKRF shRNA Plasmid (h): sc-72275-SH, NKRF shRNA Plasmid (m): sc-72276-SH, NKRF shRNA (h) Lentiviral Particles: sc-72275-V and NKRF shRNA (m) Lentiviral Particles: sc-72276-V.

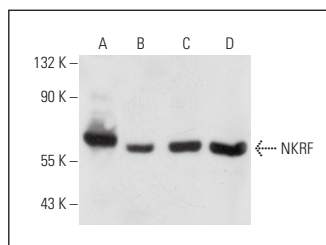
Molecular Weight of NKRF: 64 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, Neuro-2A whole cell lysate: sc-364185 or A-431 whole cell lysate: sc-2201.

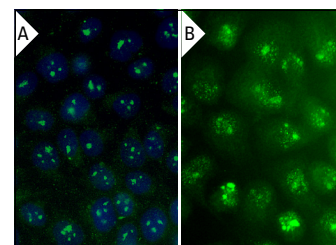
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



NKRF (E-12): sc-365568. Western blot analysis of NKRF expression in A-431 (A), Neuro-2A (B), C6 (C) and H19-7/IGF-IR (D) whole cell lysates.



NKRF (E-12): sc-365568. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization. Note DAPI nuclear counterstain from UltraCruz® Hard-set Mounting Medium (sc-359850) (A). Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear and nucleolar localization (B).

## SELECT PRODUCT CITATIONS

- Coccia, M., et al. 2017. Human NFκB repressing factor acts as a stress-regulated switch for ribosomal RNA processing and nucleolar homeostasis surveillance. *Proc. Natl. Acad. Sci. USA* 114: 1045-1050.
- Tang, Z.P., et al. 2018. MiR-494 contributes to estrogen protection of cardiomyocytes against oxidative stress via targeting (NFκB) repressing factor. *Front. Endocrinol.* 9: 215.
- Gao, Y., et al. 2021. Saponins from *Panax japonicus* ameliorate age-related renal fibrosis by inhibition of inflammation mediated by NFκB and TGF-β1/Smad signaling and suppression of oxidative stress via activation of Nrf2-ARE signaling. *J. Ginseng Res.* 45: 408-419.
- Guo, C., et al. 2023. NKRF in cardiac fibroblasts protects against cardiac remodeling post-myocardial infarction via human antigen R. *Adv. Sci.* 10: e2303283.
- Liu, Y., et al. 2024. A1CF Binding to the p65 interaction site on NKRF decreased IFN-β expression and p65 phosphorylation (Ser536) in renal carcinoma cells. *Int. J. Mol. Sci.* 25: 3576.

## 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.