

# NFATc2IP (B-1): sc-377461

## BACKGROUND

NFATc2IP (NFATc2-interacting protein), also known as NIP45, is a 419 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one ubiquitin-like domain. Interacting with NFATc2, TRAF1 and TRAF2, NFATc2IP plays a role in the inducible expression of cytokines in T-cells, specifically by enhancing NFATc2-induced interleukin (IL) production. NFATc2IP exists as three alternatively spliced isoforms and is subject to post-translational methylation; an event which augments NFATc2IP-regulated cytokine production. The gene encoding NFATc2IP maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

## REFERENCES

- Rao, A. 1994. NF-ATp: a transcription factor required for the co-ordinate induction of several cytokine genes. *Immunol. Today* 15: 274-281.
- Schneider, G., et al. 1995. The inducible transcription factor NF-AT plays an important role in the activation of the murine interleukin-4 promoter. *Immunobiology* 193: 268-272.
- Hodge, M.R., et al. 1996. NF-AT-Driven interleukin-4 transcription potentiated by NIP45. *Science* 274: 1903-1905.
- Rengarajan, J., et al. 2000. Sequential involvement of NFAT and Egr transcription factors in Fas<sub>L</sub> regulation. *Immunity* 12: 293-300.

## CHROMOSOMAL LOCATION

Genetic locus: NFATC2IP (human) mapping to 16p11.2; Nfatc2ip (mouse) mapping to 7 F3.

## SOURCE

NFATc2IP (B-1) is a mouse monoclonal antibody raised against amino acids 221-419 mapping at the C-terminus of NFATc2IP 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377461 X, 200 µg/0.1 ml.

NFATc2IP (B-1) is available conjugated to agarose (sc-377461 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377461 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377461 PE), fluorescein (sc-377461 FITC), Alexa Fluor® 488 (sc-377461 AF488), Alexa Fluor® 546 (sc-377461 AF546), Alexa Fluor® 594 (sc-377461 AF594) or Alexa Fluor® 647 (sc-377461 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377461 AF680) or Alexa Fluor® 790 (sc-377461 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

NFATc2IP (B-1) is recommended for detection of NFATc2IP of human origin, NIP45 of mouse origin and the corresponding rat homolog 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 NFATc2IP siRNA (h): sc-93159, NIP45 siRNA (m): sc-40773, NFATc2IP shRNA Plasmid (h): sc-93159-SH, NIP45 shRNA Plasmid (m): sc-40773-SH, NFATc2IP shRNA (h) Lentiviral Particles: sc-93159-V and NIP45 shRNA (m) Lentiviral Particles: sc-40773-V.

Molecular Weight (predicted) of NFATc2IP: 45 kDa.

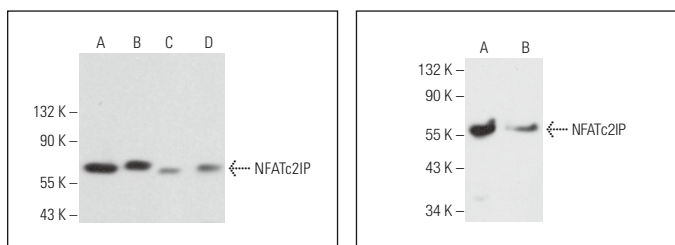
Molecular Weight (observed) of NFATc2IP: 60 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

## 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



NFATc2IP (B-1): sc-377461. Western blot analysis of NFATc2IP expression in Y79 nuclear extract (A) and HeLa (B), Neuro-2A (C) and RPE-J (D) whole cell lysates.

NFATc2IP (B-1): sc-377461. Western blot analysis of NFATc2IP expression in Jurkat (A) and K-562 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Zhao, L., et al. 2024. miR-31-5p suppresses myocardial hypertrophy by targeting Nfatc2ip. *J. Cell. Mol. Med.* 28: e18413.

## STORAGE

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

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