

# NFATc2IP (FT-113): sc-134403

## 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

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3. Hodge, M.R., et al. 1996. NFAT-driven interleukin-4 transcription potentiated by NIP45. *Science* 274: 1903-1905.
4. Rengarajan, J., et al. 2000. Sequential involvement of NFAT and Egr transcription factors in FAS-L regulation. *Immunity* 12: 293-300.
5. Lieberson, R., et al. 2001. Tumor necrosis factor receptor-associated factor (TRAF)2 represses the T helper cell type 2 response through interaction with NFAT-interacting protein (NIP45). *J. Exp. Med.* 194: 89-98.
6. Mowen, K.A., et al. 2004. Arginine methylation of NIP45 modulates cytokine gene expression in effector T lymphocytes. *Mol. Cell* 15: 559-571.
7. Novatchkova, M., et al. 2005. Proteins with two SUMO-like domains in chromatin-associated complexes: the RENi (Rad60-ESC2-NIP45) family. *BMC Bioinformatics* 6: 22.
8. Bryce, P.J., et al. 2006. TRAF1 regulates Th2 differentiation, allergic inflammation and nuclear localization of the Th2 transcription factor, NIP45. *Int. Immunol.* 18: 101-111.

## CHROMOSOMAL LOCATION

Genetic locus: NFATC2IP (human) mapping to 16p11.2.

## SOURCE

NFATc2IP (FT-113) is a mouse monoclonal antibody raised against recombinant NFATc2IP protein of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

NFATc2IP (FT-113) is recommended for detection of NFATc2IP 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)] 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, NFATc2IP shRNA Plasmid (h): sc-93159-SH and NFATc2IP shRNA (h) Lentiviral Particles: sc-93159-V.

Molecular Weight (predicted) of NFATc2IP: 45 kDa.

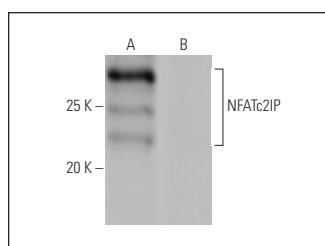
Molecular Weight (observed) of NFATc2IP: 60 kDa.

Positive Controls: human NFATc2IP transfected 293T whole cell lysate.

## 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).

## DATA



NFATc2IP (FT-113): sc-134403. Western blot analysis of NFATc2IP expression in human NFATc2IP transfected (A) and non-transfected (B) 293T 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](http://www.scbt.com) for detailed protocols and support products.