

# NF-YB (G-2): sc-376546

## BACKGROUND

The CCAAT-binding factor NF-Y is a heteromeric transcription factor that specifically binds to CCAAT sequences in many eukaryotic genes. NF-Y is made up of three subunits, NF-YA, NF-YB and NF-YC. All three components are necessary for DNA binding. In each NF-Y subunit, the segment needed for formation of the NF-Y-DNA complex is conserved from yeast to human. These conserved segments are homologous to the histone-fold motif of eukaryotic histones. The DNA-binding domains of the NF-YB and NF-YC subunits have been suggested to interact through a protein-protein, histone-fold "handshake" motif in a manner analogous to the histone proteins H2B and H2A, respectively.

## CHROMOSOMAL LOCATION

Genetic locus: NFYB (human) mapping to 12q23.3; Nfyb (mouse) mapping to 10 C1.

## SOURCE

NF-YB (G-2) is a mouse monoclonal antibody raised against amino acids 1-207 representing full length NF-YB 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-376546 X, 200 µg/0.1 ml.

NF-YB (G-2) is available conjugated to agarose (sc-376546 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376546 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376546 PE), fluorescein (sc-376546 FITC), Alexa Fluor® 488 (sc-376546 AF488), Alexa Fluor® 546 (sc-376546 AF546), Alexa Fluor® 594 (sc-376546 AF594) or Alexa Fluor® 647 (sc-376546 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376546 AF680) or Alexa Fluor® 790 (sc-376546 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

NF-YB (G-2) is recommended for detection of NF-YB 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), 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).

NF-YB (G-2) is also recommended for detection of NF-YB in additional species, including bovine and porcine.

Suitable for use as control antibody for NF-YB siRNA (h): sc-29945, NF-YB siRNA (m): sc-29946, NF-YB shRNA Plasmid (h): sc-29945-SH, NF-YB shRNA Plasmid (m): sc-29946-SH, NF-YB shRNA (h) Lentiviral Particles: sc-29945-V and NF-YB shRNA (m) Lentiviral Particles: sc-29946-V.

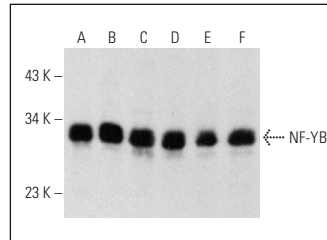
NF-YB (G-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NF-YB: 32 kDa.

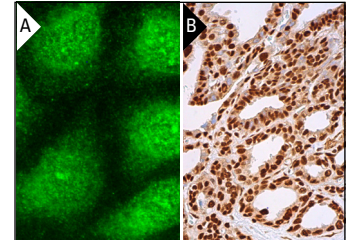
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



NF-YB (G-2): sc-376546. Western blot analysis of NF-YB expression in RAW 264.7 nuclear extract (A) and HeLa (B), A549 (C), NIH/3T3 (D), A-10 (E) and C6 (F) whole cell lysates.



NF-YB (G-2): sc-376546. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Xie, D., et al. 2013. Dynamic *trans*-acting factor colocalization in human cells. *Cell* 155: 713-724.
- Deng, B., et al. 2019. An LTR retrotransposon-derived lncRNA interacts with RNF169 to promote homologous recombination. *EMBO Rep.* 20: e47650.
- Doerfler, P.A., et al. 2021. Activation of  $\gamma$ -globin gene expression by GATA1 and NF-Y in hereditary persistence of fetal hemoglobin. *Nat. Genet.* 53: 1177-1186.
- Kolloch, L., et al. 2022. Control of expression of key cell cycle enzymes drives cell line-specific functions of CDK7 in human PDAC cells. *Int. J. Mol. Sci.* 23: 812.
- Yu, Q., et al. 2023. Dynamics and regulation of mitotic chromatin accessibility bookmarking at single-cell resolution. *Sci. Adv.* 9: eadd2175.

## 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.

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