SANTA CRUZ BIOTECHNOLOGY, INC.

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 sub-units 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 μ g lgG₁ 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 μ g/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 μ g per 100-500 μ g 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.

STORAGE

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

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

- 1. 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 IncRNA interacts with RNF169 to promote homologous recombination. EMBO Rep. 20: e47650.
- 3. Doerfler, P.A., et al. 2021. Activation of γ -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.
- Feng, L., et al. 2023. Long non-coding RNA H19 recruits NF-YB to activate MBTD1 and regulate doxorubicin resistance in lymphoma cells. Mol. Biotechnol. 65: 997-1009.
- Weissman, J.D., et al. 2023. Transgenerational epigenetic inheritance of MHC class I gene expression is regulated by the CCAAT promoter element. bioRxiv. E-published.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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Molecular Weight of NF-YB: 32 kDa.