SANTA CRUZ BIOTECHNOLOGY, INC.

NF-YC (G-12): sc-390985

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

REFERENCES

1. Baxevanis, A.D., et al. 1995. A varitey of DNA-binding and multimeric proteins contain the histone fold motif. Nucleic Acids Res. 23: 2685-2691.
2. Sinha, S., et al. 1996. Three classes of mutations in the α subunit of the CCAAT-binding factor CBF delineate functional domains involved in the three-step assembly of the CBF-DNA complex. Mol. Cell. Biol. 16: 328-337.
3. Currie, R.A. 1997. Functional interaction between the DNA binding subunit trimerization domain of NF-Y and high mobility group protein HMG-I(Y). J. Biol. Chem. 272: 30880-30888.
4. Maity, S.N. and de Crombrugghe, B. 1998. Role of the CCAAT-binding protein CBF/NF-Y in transcription. Trends Biochem. Sci. 23: 174-178.
5. Liang, S.G. and Maity, S.N. 1998. Pathway of complex formation between DNA and three subunits of CBF/NF-Y. Photocross-linking analysis of DNA-protein interaction and characterization of equilibrium steps of subunit interaction and DNA binding. J. Biol. Chem. 273: 31590-31598.
6. Mantovani, R. 1998. A survey of 178 NF-Y binding CCAAT boxes. Nucleic Acids Res. 26: 1135-1143.

CHROMOSOMAL LOCATION

Genetic locus: NFYC (human) mapping to 1p34.2; Nfyc (mouse) mapping to 4 D2.2.

SOURCE

NF-YC (G-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 307-335 at the C-terminus of NF-YC of human origin.

PRODUCT

Each vial contains 200 µg IgM 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-390985 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-390985 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

NF-YC (G-12) is recommended for detection of NF-YC 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-YC (G-12) is also recommended for detection of NF-YC in additional species, including canine and bovine.

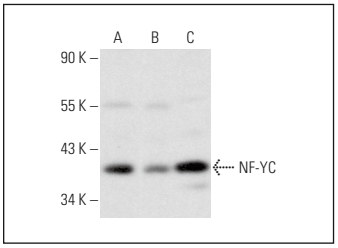
Suitable for use as control antibody for NF-YC siRNA (h): sc-37733, NF-YC siRNA (m): sc-37734, NF-YC shRNA Plasmid (h): sc-37733-SH, NF-YC shRNA Plasmid (m): sc-37734-SH, NF-YC shRNA (h) Lentiviral Particles: sc-37733-V and NF-YC shRNA (m) Lentiviral Particles: sc-37734-V.

NF-YC (G-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

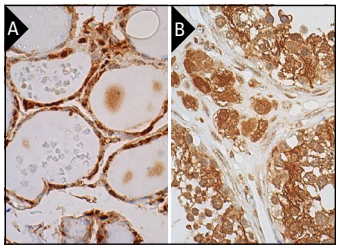
Molecular Weight of NF-YC: 40 kDa.

Positive Controls: TK-1 whole cell lysate: sc-364798, RAW 264.7 whole cell lysate: sc-2211 or C6 whole cell lysate: sc-364373.

DATA



NF-YC (G-12): sc-390985. Western blot analysis of NF-YC expression in TK-1 (**A**), RAW 264.7 (**B**) and C6 (**C**) whole cell lysates.



NF-YC (G-12): sc-390985. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing nuclear staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts (**B**).

SELECT PRODUCT CITATIONS

1. Liu, Z., et al. 2023. NFYC-37 promotes tumor growth by activating the mevalonate pathway in bladder cancer. Cell Rep. 42: 112963.

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.