SANTA CRUZ BIOTECHNOLOGY, INC.

NFX1 (E-15): sc-163135

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The Power to Question

BACKGROUND

NFX1 (nuclear transcription factor, X-box binding 1), also known as NFX2, is a ubiquitously expressed nucleic acid binding protein. Localizing to the nucleus, NFX1 contains an R3H domain, a RING-type zinc finger and nine NFX1-type zinc fingers. NFX1 is induced by IFN-γ and functions as a transcriptional repressor, binding to the conserved X1 region within the X-box motif found in the promoter region of MHC class II genes. Acting as a potent repressor of MHC class II gene expression, NFX1 may be involved in regulating the duration of an inflammatory response. This suggests that NFX1 could be a useful target in the treatment of various diseases involving inflammation and autoimmunity. In addition, due to the presence of a RING-type finger domain, NFX1 may also function as an E3 ubiquitin-protein ligase. Two NFX1 isoforms, namely NFX1-91 and NFX1-123, exist due to alternative splicing events and differ in their C-termini.

REFERENCES

1. Hume, C.R. and Lee, J.S. 1989. Congenital immunodeficiencies associated with absence of HLA class II antigens on lymphocytes result from distinct mutations in *trans*-acting factors. Hum. Immunol. 26: 288-309.
2. Song, Z., et al. 1994. A novel cysteine-rich sequence-specific DNA-binding protein interacts with the conserved X-box motif of the human major histocompatibility complex class II genes via a repeated Cys-His domain and functions as a transcriptional repressor. J. Exp. Med. 180: 1763-1774.
3. Kunz, J., et al. 2000. Fap-1, a homologue of human transcription factor NFX1, competes with rapamycin for binding to FKBP12 in yeast. Mol. Microbiol. 37: 1480-1493.
4. Arlotta, P., et al. 2002. Murine NFX.1: isolation and characterization of its messenger RNA, mapping of its chromosomal location and assessment of its developmental expression. Immunology 106: 173-181.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603255. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: NFX1 (human) mapping to 9p13.3; Nfx1 (mouse) mapping to 4 A5.

SOURCE

NFX1 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NFX1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-163135 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NFX1 (E-15) is recommended for detection of NFX1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with NFXL1.

NFX1 (E-15) is also recommended for detection of NFX1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NFX1 siRNA (h): sc-92717, NFX1 siRNA (m): sc-149948, NFX1 shRNA Plasmid (h): sc-92717-SH, NFX1 shRNA Plasmid (m): sc-149948-SH, NFX1 shRNA (h) Lentiviral Particles: sc-92717-V and NFX1 shRNA (m) Lentiviral Particles: sc-149948-V.

Molecular Weight of NFX1 isoforms: 91/123 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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