# NFX1 (h2): 293T Lysate: sc-171830



The Power to Overtin

#### **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- $\gamma$  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.
- Song, Z., Krishna, S., Thanos, D., Strominger, J.L. and Ono, S.J. 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., Loeschmann, A., Deuter-Reinhard, M. and Hall, M.N. 2000. FAP1, a homologue of human transcription factor NF-X1, competes with rapamycin for binding to FKBP12 in yeast. Mol. Microbiol. 37: 1480-1493.
- Arlotta, P., Miyazaki, D., Copeland, N.G., Gilbert, D.J., Jenkins, N.A. and Ono, S.J. 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/
- Lisso, J., Altmann, T. and Müssig, C. 2006. The AtNFXL1 gene encodes a NF-X1 type zinc finger protein required for growth under salt stress. FEBS Lett. 580: 4851-4856.
- Katzenellenbogen, R.A., Egelkrout, E.M., Vliet-Gregg, P., Gewin, L.C., Gafken, P.R. and Galloway, D.A. 2007. NFX1-123 and poly(A) binding proteins synergistically augment activation of telomerase in human papillomavirus type 16 E6-expressing cells. J. Virol. 81: 3786-3796.
- 8. Larkindale, J. and Vierling, E. 2008. Core genome responses involved in acclimation to high temperature. Plant Physiol. 146: 748-761.

# **CHROMOSOMAL LOCATION**

Genetic locus: NFX1 (human) mapping to 9p13.3.

## **RESEARCH USE**

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

#### **PRODUCT**

NFX1 (h2): 293T Lysate represents a lysate of human NFX1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## **APPLICATIONS**

NFX1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive NFX1 antibodies. Recommended use: 10-20 µl per lane.

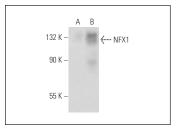
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

NFX1 (Y-14): sc-100973 is recommended as a positive control antibody for Western Blot analysis of enhanced human NFX1 expression in NFX1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## **DATA**



NFX1 (Y-14): sc-100973. Western blot analysis of NFX1 expression in non-transfected: sc-117752 (A) and human NFX1 transfected: sc-171830 (B) 293T whole cell Ivsates.

#### **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## **PROTOCOLS**

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

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