

# RFX1 (D-19): sc-10650

## BACKGROUND

EP is a regulatory enhancer element found in several promoters on viral genes, and similar sites are also present in cellular genes, including the MIE-1 binding site (MIE) of the human c-Myc gene, the X box of MHC class II promoters and a binding site in the proliferating cell nuclear antigen promoter. The EP sites present in the X box of MHC class II promoters are distinctly nonpalindromic sequences that contain only a single EP-homologous half-site. The EP element is bound by an ubiquitous nuclear protein complex that consists of homo- and heterodimers involving the RFX1, RFX2 and RFX3 proteins. The RFX proteins represent an essential class II transcription factor family that shares several conserved regions, including the centrally located DNA-binding domain (DBD) and the D region found in the C-terminal part of these proteins which facilitates dimerization. RFX complexes can activate the enhancer elements of several HBV genes and also promote the induction of MHC class II genes in response to interferon- $\gamma$  stimulation. Two additional subunits, RFX5, RFX-B/Ank, are also involved in the RFX complexes, yet they bind additional elements in the X1 half of the X box.

## REFERENCES

1. Dikstein, R., et al. 1990. Functional organization of the hepatitis B virus enhancer. *Mol. Cell. Biol.* 10: 3682-3689.
2. Fontes, J.D., et al. 1997. Assembly of functional regulatory complexes on MHC class II promoters *in vivo*. *J. Mol. Biol.* 270: 336-345.
3. Katan, Y., et al. 1997. The transcriptional activation and repression domains of RFX1, a context-dependent regulator, can mutually neutralize their activities. *Nucleic. Acids. Res.* 25: 3621-3628.
4. Masternak, K., et al. 1998. A gene encoding a novel RFX-associated trans-activator is mutated in the majority of MHC class II deficiency patients. *Nat. Genet* 20: 273-277.

## CHROMOSOMAL LOCATION

Genetic locus: RFX1 (human) mapping to 19p13.12; Rfx1 (mouse) mapping to 8 C3.

## SOURCE

RFX1 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RFX1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG 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-10650 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-10650 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

RFX1 (D-19) is recommended for detection of RFX1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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). RFX1 (D-19) is also recommended for detection of RFX1 in additional species, including canine and porcine.

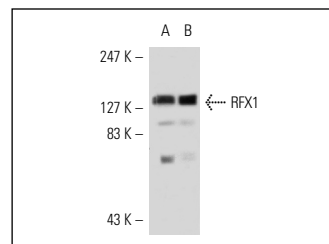
Suitable for use as control antibody for RFX1 siRNA (h): sc-37741, RFX1 siRNA (m): sc-37742, RFX1 shRNA Plasmid (h): sc-37741-SH, RFX1 shRNA Plasmid (m): sc-37742-SH, RFX1 shRNA (h) Lentiviral Particles: sc-37741-V and RFX1 shRNA (m) Lentiviral Particles: sc-37742-V.

RFX1 (D-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

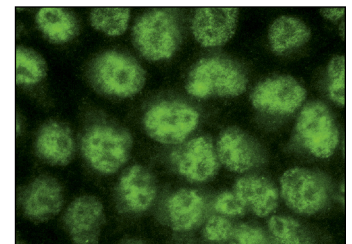
Molecular Weight of RFX1: 130 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, K-562 nuclear extract: sc-2130 or Jurkat nuclear extract: sc-2132.

## DATA



RFX1 (D-19): sc-10650. Western blot analysis of RFX1 expression in HeLa (A) and K-562 (B) nuclear extracts.



RFX1 (D-19): sc-10650. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

1. Fan, J., et al. 2006. En masse nascent transcription analysis to elucidate regulatory transcription factors. *Nucleic Acids Res.* 34: 1492-1500.
2. Hsu, Y.C., et al. 2010. Regulation of FGF1 gene promoter through transcription factor RFX1. *J. Biol. Chem.* 285: 13885-13895.
3. Ren, Y.R., et al. 2012. Unbiased discovery of interactions at a control locus driving expression of the cancer-specific therapeutic and diagnostic target, mesothelin. *J. Proteome Res.* 11: 5301-5310.

## RESEARCH USE

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


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Try **RFX1 (F-6): sc-374270** or **RFX1 (H-2): sc-376041**, our highly recommended monoclonal alternatives to RFX1 (D-19).