SANTA CRUZ BIOTECHNOLOGY, INC.

RFX1 (I-19): sc-10652

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 MIF-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 a 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-γ stimulation.

CHROMOSOMAL LOCATION

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

SOURCE

RFX1 (I-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RFX1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-10652 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-10652 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RFX1 (I-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 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). RFX1 (I-19) is also recommended for detection of RFX1 in additional species, including canine, bovine 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 (I-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

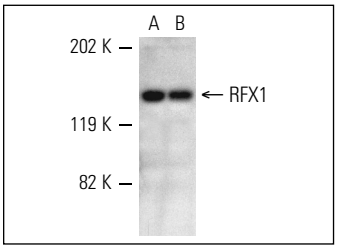
Molecular Weight of RFX1: 130 kDa.

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

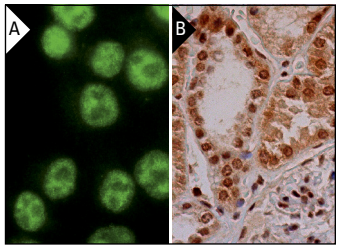
STORAGE

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

DATA



RFX1 (I-19): sc-10652. Western blot analysis of RFX1 expression in K-562 (**A**) and Jurkat (**B**) nuclear extracts.



RFX1 (I-19): sc-10652. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing nuclear staining of cells in glomeruli and nuclear and cytoplasmic staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Sengupta, P.K., et al. 2002. The RFX family interacts at the collagen (COL1A2) start site and represses transcription. J. Biol. Chem. 277: 24926-24937.
2. Xie, X., et al. 2007. Systematic discovery of regulatory motifs in conserved regions of the human genome, including thousands of CTCF insulator sites. Proc. Natl. Acad. Sci. USA 104: 7145-7150.
3. Wang, K.R., et al. 2007. RFX1 mediates the serum-induced immediate early response of Id2 gene expression. J. Biol. Chem. 282: 26167-26177.
4. Kistler, W.S., et al. 2009. Differential expression of Rfx1-4 during mouse spermatogenesis. Gene Expr. Patterns 9: 515-519.
5. Hsu, Y.C., et al. 2010. Regulation of FGF1 gene promoter through transcription factor RFX1. J. Biol. Chem. 285: 13885-13895.
6. Enenstein, J., et al. 2010. Proinflammatory phenotype with imbalance of KLF2 and RelA: risk of childhood stroke with sickle cell anemia. Am. J. Hematol. 85: 18-23.
7. Creyghton, M.P., et al. 2010. Histone H3K27ac separates active from poised enhancers and predicts developmental state. Proc. Natl. Acad. Sci. USA 107: 21931-21936.

RESEARCH USE

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