

RFX3 (T-17): sc-10662

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 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- γ 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 transactivator is mutated in the majority of MHC class II deficiency patients. *Nat. Genet.* 20: 273-277.
5. Katan-Khaykovich, Y., et al. 1998. RFX1, a single DNA-binding protein with a split dimerization domain, generates alternative complexes. *J. Biol. Chem.* 273: 24504-24512.

CHROMOSOMAL LOCATION

Genetic locus: RFX3 (human) mapping to 9p24.2; Rfx3 (mouse) mapping to 19 C1.

SOURCE

RFX3 (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RFX3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-10662 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-10662 X, 200 μ g/0.1 ml.

APPLICATIONS

RFX3 (T-17) is recommended for detection of RFX3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

RFX3 (T-17) is also recommended for detection of RFX3 in additional species, including equine, canine, bovine and porcine.

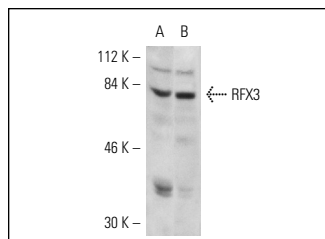
Suitable for use as control antibody for RFX3 siRNA (h): sc-37745, RFX3 siRNA (m): sc-37746, RFX3 shRNA Plasmid (h): sc-37745-SH, RFX3 shRNA Plasmid (m): sc-37746-SH, RFX3 shRNA (h) Lentiviral Particles: sc-37745-V and RFX3 shRNA (m) Lentiviral Particles: sc-37746-V.

RFX3 (T-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RFX3: 79 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, K-562 nuclear extract: sc-2130 or Jurkat whole cell lysate: sc-2204.

DATA



RFX3 (T-17): sc-10662. Western blot analysis of RFX3 expression in HeLa (A) and K-562 (B) nuclear extracts.

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. Jiao, W., et al. 2005. E2F-dependent repression of topoisomerase II regulates heterochromatin formation and apoptosis in cells with melanoma-prone mutation. *Cancer Res.* 65: 4067-4077.
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.

STORAGE

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

RESEARCH USE

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