

RFX2 (C-15): sc-10657

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.

CHROMOSOMAL LOCATION

Genetic locus: RFX2 (human) mapping to 19p13.3; Rfx2 (mouse) mapping to 17 D.

SOURCE

RFX2 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of RFX2 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-10657 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-10657 X, 200 μ g/0.1 ml.

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.

APPLICATIONS

RFX2 (C-15) is recommended for detection of RFX2 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).

RFX2 (C-15) is also recommended for detection of RFX2 in additional species, including equine, canine and avian.

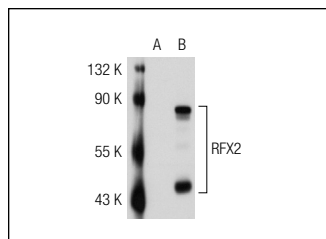
Suitable for use as control antibody for RFX2 siRNA (h): sc-37743, RFX2 siRNA (m): sc-37744, RFX2 shRNA Plasmid (h): sc-37743-SH, RFX2 shRNA Plasmid (m): sc-37744-SH, RFX2 shRNA (h) Lentiviral Particles: sc-37743-V and RFX2 shRNA (m) Lentiviral Particles: sc-37744-V.

RFX2 (C-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RFX2: 77-80 kDa.

Positive Controls: RFX2 (m): 293T Lysate: sc-123092, KNRK whole cell lysate: sc-2214 or K-562 whole cell lysate: sc-2203.

DATA



RFX2 (C-15): sc-10657. Western blot analysis of RFX2 expression in non-transfected: sc-117752 (A) and mouse RFX2 transfected: sc-123092 (B) 293T whole cell lysates.

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. Horvath, G.C., et al. 2004. RFX2 is a potential transcriptional regulatory factor for histone H1t and other genes expressed during the meiotic phase of spermatogenesis. *Biol. Reprod.* 71: 1551-1559.
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. VanWert, J.M., et al. 2008. Binding of RFX2 and NF- γ to the testis-specific histone H1t promoter may be required for transcriptional activation in primary spermatocytes. *J. Cell. Biochem.* 104: 1087-1101.
5. Horvath, G.C., et al. 2009. RFX2 is a candidate downstream amplifier of A-MYB regulation in mouse spermatogenesis. *BMC Dev. Biol.* 9: 63.
6. Kistler, W.S., et al. 2009. Differential expression of Rfx1-4 during mouse spermatogenesis. *Gene Expr. Patterns* 9: 515-519.