



RFX2 (h): 293T Lysate: sc-172590

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. To 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.
6. Westerheide, S.D., et al. 1999. Orientation and positional mapping of the subunits of the multicomponent transcription factors RFX and X2BP to the major histocompatibility complex class II transcriptional enhancer. *Nucleic Acids Res.* 27: 1635-1641.
7. Gajiwala, K.S., et al. 2000. Structure of the winged-helix protein hRFX1 reveals a new mode of DNA binding. *Nature* 403: 916-921.
8. Nagarajan, U.M., et al. 2000. Novel mutations within the RFX-B gene and partial rescue of MHC and related genes through exogenous class II transactivator in RFX-B-deficient cells. *J. Immunol.* 164: 3666-3674.

CHROMOSOMAL LOCATION

Genetic locus: RFX2 (human) mapping to 19p13.3.

PRODUCT

RFX2 (h): 293T Lysate represents a lysate of human RFX2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

RFX2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive RFX2 antibodies. Recommended use: 10-20 μ l per lane.

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

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.

RESEARCH USE

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

PROTOCOLS

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