

RFX4 (E-14): sc-132790

BACKGROUND

EP and EP-like sites are regulatory enhancer elements found in the promoters of several viral and mammalian genes which, in humans, include the MIF-1 binding site (MIE) of the c-Myc gene, the X box of MHC class II promoters and a binding site in the PCNA (proliferating cell nuclear antigen) promoter. The EP-like 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-like element is bound by a ubiquitous nuclear protein complex that consists of homo- and heterodimers involving the RFX1, RFX2, RFX3, RFX4 and RFX5 proteins. The RFX proteins represent an essential class II transcription factor family that share several conserved regions, including a centrally located DNA-binding domain (DBD) and a C-terminal D region that facilitates dimerization. RFX4 is a 735 amino acid nuclear protein that, via interactions with other RFX proteins, can bind DNA and is thought to activate the transcription of target genes. Four isoforms, each of which exhibit different tissue specificity, exist due to alternative splicing events.

REFERENCES

1. Reith, W., et al. 1994. RFX1, a transactivator of hepatitis B virus enhancer I, belongs to a novel family of homodimeric and heterodimeric DNA-binding proteins. *Mol. Cell. Biol.* 14: 1230-1244.
2. Emery, P., et al. 1996. RFX proteins, a novel family of DNA binding proteins conserved in the eukaryotic kingdom. *Nucleic Acids Res.* 24: 803-807.
3. Gajiwala, K.S., et al. 2000. Structure of the winged-helix protein hRFX1 reveals a new mode of DNA binding. *Nature* 403: 916-921.
4. Morotomi-Yano, K., et al. 2002. Human regulatory factor X 4 (RFX4) is a testis-specific dimeric DNA-binding protein that cooperates with other human RFX members. *J. Biol. Chem.* 277: 836-842.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603958. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: RFX4 (human) mapping to 12q23.3; Rfx4 (mouse) mapping to 10 C1.

SOURCE

RFX4 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RFX4 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.

Blocking peptide available for competition studies, sc-132790 P, (100 µg 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-132790 X, 200 µg/0.1 ml.

APPLICATIONS

RFX4 (E-14) is recommended for detection of RFX4 isoforms 1-4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other RFX family members.

RFX4 (E-14) is also recommended for detection of RFX4 isoforms 1-4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RFX4 siRNA (h): sc-95773, RFX4 siRNA (m): sc-152827, RFX4 shRNA Plasmid (h): sc-95773-SH, RFX4 shRNA Plasmid (m): sc-152827-SH, RFX4 shRNA (h) Lentiviral Particles: sc-95773-V and RFX4 shRNA (m) Lentiviral Particles: sc-152827-V.

RFX4 (E-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

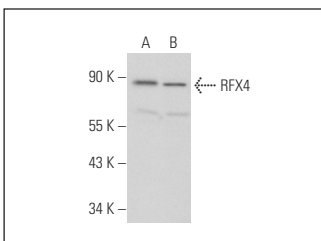
Molecular Weight of RFX4 isoforms 1/2/3/4: 83/85/73/64 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, NTERA-2 cl.D1 whole cell lysate: sc-364181 or HEK293 whole cell lysate: sc-45136.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



RFX4 (E-14): sc-132790. Western blot analysis of RFX4 expression in NTERA-2 cl.D1 (A) and HEK293 (B) whole cell lysates.

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.