

# RFX6 (S-15): sc-169145

## 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, RFX5 and RFX6 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. RFX6, also known as RFXDC1, is a 928 amino acid nuclear protein that, via interactions with other RFX proteins, can bind DNA and is thought to activate the transcription of target genes. RFX6 is specifically expressed in pancreas, small intestine and colon. Mutations in the gene encoding RFX6 is the cause of the Mitchell-Riley syndrome (MIRIS), which is characterized by neonatal diabetes, duodenal and jejunal atresia, a hypoplastic or annular pancreas and absent gallbladder.

## REFERENCES

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2. 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.
3. 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.
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5. Gajiwala, K.S., et al. 2000. Structure of the winged-helix protein hRFX1 reveals a new mode of DNA binding. *Nature* 403: 916-921.
6. Mitchell, J., et al. 2004. Neonatal diabetes, with hypoplastic pancreas, intestinal atresia and gall bladder hypoplasia: search for the aetiology of a new autosomal recessive syndrome. *Diabetologia* 47: 2160-2167.
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## RESEARCH USE

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

## CHROMOSOMAL LOCATION

Genetic locus: RFX6 (human) mapping to 6q22.1; Rfx6 (mouse) mapping to 10 B3.

## SOURCE

RFX6 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RFX6 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-169145 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-169145 X, 200 µg/0.1 ml.

## APPLICATIONS

RFX6 (S-15) is recommended for detection of RFX6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 RFXDC2.

RFX6 (S-15) is also recommended for detection of RFX6 in additional species, including equine, canine and avian.

Suitable for use as control antibody for RFX6 siRNA (h): sc-95649, RFX6 siRNA (m): sc-152828, RFX6 shRNA Plasmid (h): sc-95649-SH, RFX6 shRNA Plasmid (m): sc-152828-SH, RFX6 shRNA (h) Lentiviral Particles: sc-95649-V and RFX6 shRNA (m) Lentiviral Particles: sc-152828-V.

RFX6 (S-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RFX6: 102 kDa.

## 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) 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.

## STORAGE

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