

Positive cofactor 4 (D-18): sc-9442

BACKGROUND

In eukaryotic cells, transcription is regulated in part by high molecular weight coactivating complexes that mediate signals between transcriptional activators and RNA polymerase. RNA polymerase II (RNAPII) holoenzyme contains numerous proteins that largely consist of RNA processing factors, RNA helicase, general transcription factors and SRB co-activating complexes. RNAPII mediated basal- and gene-specific transcriptional activation requires the association of various cofactors that includes PC4 (human Positive cofactor 4). Positive cofactor 4 interacts with the activation domain of transcription factor IIA (TFIIA) and TATA-binding protein (TBP)-associated factors (TAFs) to directly bind to double stranded DNA. Positive cofactor 4 induces both activation and repression of RNAPII basal transcription, depending on the presence or absence of these transcription factors and holoenzyme components. Additionally, Positive cofactor 4 is phosphorylated by TFIIID and TFIIH, which releases Positive cofactor 4 from the DNA promoter region and thereby inhibits the assembly of Positive cofactor 4 into the transcriptional promoting complex and blocks transcription.

REFERENCES

1. Ge, H., et al. 1994. Purification, cloning, and characterization of a human coactivator, PC4, that mediates transcriptional activation of class II genes. *Cell* 78: 513-523.
2. Kaiser, K., et al. 1995. The coactivator p15 (PC4) initiates transcriptional activation during TFIIA-TFIIID-promoter complex formation. *EMBO J.* 14: 3520-3527.

CHROMOSOMAL LOCATION

Genetic locus: SUB1 (human) mapping to 5p13.3; Sub1 (mouse) mapping to 15 A1.

SOURCE

Positive cofactor 4 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Positive cofactor 4 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-9442 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-9442 X, 200 µg/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

Positive cofactor 4 (D-18) is recommended for detection of Positive cofactor 4 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

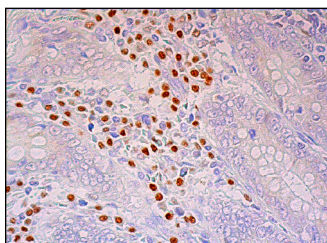
Positive cofactor 4 (D-18) is also recommended for detection of Positive cofactor 4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Positive cofactor 4 siRNA (h): sc-38583, Positive cofactor 4 siRNA (m): sc-38584, Positive cofactor 4 shRNA Plasmid (h): sc-38583-SH, Positive cofactor 4 shRNA Plasmid (m): sc-38584-SH, Positive cofactor 4 shRNA (h) Lentiviral Particles: sc-38583-V and Positive cofactor 4 shRNA (m) Lentiviral Particles: sc-38584-V.

Positive cofactor 4 (D-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Positive cofactor 4: 15 kDa.

DATA



Positive cofactor 4 (D-18): sc-9442. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing nuclear staining of lymphoid cells.

SELECT PRODUCT CITATIONS

1. Shell, S.A., et al. 2007. Increased phosphorylation of the carboxyl-terminal domain of RNA Polymerase II and loading of polyadenylation and cotranscriptional factors contribute to regulation of the Ig heavy chain mRNA in plasma cells. *J. Immunol.* 179: 7663-7673.

PROTOCOLS

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



Try **Positive cofactor 4 (H-12): sc-166280** or **Positive cofactor 4 (H-8): sc-166279**, our highly recommended monoclonal alternatives to Positive cofactor 4 (D-18).