

# Positive cofactor 4 (H-114): sc-48778

## 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 coactivating complexes. RNAPII mediated basal and gene-specific transcriptional activation requires the association of various cofactors that include PC4 (human positive cofactor 4). PC4 is a protein that 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. PC4 induces both activation and repression of RNAPII basal transcription depending on the presence or absence of these transcription factors and holoenzyme components. Additionally, PC4 is phosphorylated by TFIID and TFIIH, which releases PC4 from the DNA promoter region and, thereby, inhibits the assembly of PC4 into the transcriptional promoting complex and blocks transcription.

## REFERENCES

1. Ge, H. and Roeder, R.G. 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-TFIID-promoter complex formation. *EMBO. J.* 14: 3520-3527.
3. Chao, D.M., et al. 1996. A mammalian SRB protein associated with an RNA polymerase II holoenzyme. *Nature* 380: 82-85.
4. Wu, S.Y. and Chiang, C.M. 1998. Properties of PC4 and an RNA polymerase II complex in directing activated and basal transcription *in vitro*. *J. Biol. Chem.* 273: 12492-12498.

## CHROMOSOMAL LOCATION

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

## SOURCE

Positive cofactor 4 (H-114) is a rabbit polyclonal antibody raised against amino acids 14-127 mapping at 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-48778 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.

## APPLICATIONS

Positive cofactor 4 (H-114) 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), 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), 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 (H-114) is also recommended for detection of Positive cofactor 4 in additional species, including equine, canine, bovine and porcine.

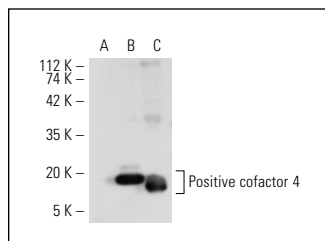
Suitable for use as control antibody for Positive cofactor 4 siRNA (h): sc-38583, Positive cofactor 4 siRNA (m): sc-38584, Positive cofactor 4 shRNA Plasmid (h): sc-38583-SH, Positive cofactor 4 shRNA Plasmid (m): sc-38584-SH, Positive cofactor 4 shRNA (h) Lentiviral Particles: sc-38583-V and Positive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

Positive cofactor 4 (H-114) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

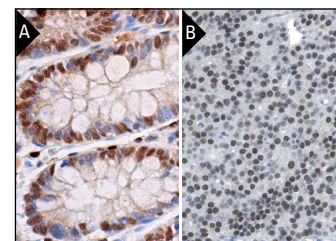
Molecular Weight of Positive cofactor 4: 15 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, Positive cofactor 4 (h2): 293 Lysate: sc-112271 or Jurkat whole cell lysate: sc-2204.

## DATA



Positive cofactor 4 (H-114): sc-48778. Western blot analysis of Positive cofactor 4 expression in non-transfected 293: sc-110760 (A), human Positive cofactor 4 transfected 293: sc-112271 (B) and Jurkat (C) whole cell lysates.



Positive cofactor 4 (H-114): sc-48778. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing nuclear staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

## RESEARCH USE

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



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 (H-114).