

Pol II (C-18): sc-5943

BACKGROUND

RNA polymerase II (Pol II) is an enzyme that is composed of 12 subunits and is responsible for the transcription of protein-coding genes. Transcription initiation requires Pol II-mediated recruitment of transcription machinery to a target promoter, thereby allowing transcription to begin. The largest subunit of Pol II (referred to as RPB1 or RPB205) is a 1,840 amino acid protein that contains one C₂H₂-type zinc finger and a C-terminal domain comprised of several heptapeptide repeats. Although Pol II function requires the cooperation of all 12 subunits, the largest subunit conveys Pol II catalytic activity and, together with the second largest subunit, forms the active center of the Pol II enzyme. Additionally, the large subunit participates in forming the DNA-binding domain of Pol II, a groove that is necessary for transcription of the DNA template. Without proper function of the large subunit, mRNA synthesis and subsequent transcription elongation cannot occur.

CHROMOSOMAL LOCATION

Genetic locus: POLR2A (human) mapping to 17p13.1; Polr2a (mouse) mapping to 11 B3.

SOURCE

Pol II (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Pol II of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5943 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Pol II (C-18) is recommended for detection of Pol II 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).

Pol II (C-18) is also recommended for detection of Pol II in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Pol II siRNA (h): sc-36290, Pol II siRNA (m): sc-36291, Pol II shRNA Plasmid (h): sc-36290-SH, Pol II shRNA Plasmid (m): sc-36291-SH, Pol II shRNA (h) Lentiviral Particles: sc-36290-V and Pol II shRNA (m) Lentiviral Particles: sc-36291-V.

Molecular Weight (predicted) of Pol II: 217 kDa.

Molecular Weight (observed) of Pol II: 192-253 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, A-673 cell lysate: sc-2414 or U-2 OS cell lysate: sc-2295.

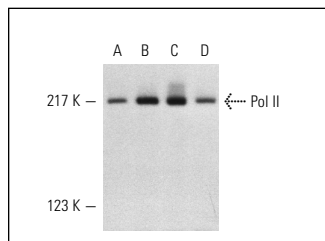
RESEARCH USE

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

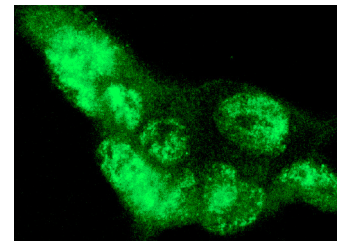
STORAGE

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

DATA



Pol II (C-18): sc-5943. Western blot analysis of Pol II expression in A-673 (A), U-2 OS (B), A-431 (C) and NIH/3T3 (D) whole cell lysates.



Pol II (C-18): sc-5943. Immunofluorescence staining of methanol-fixed A-431 cells showing nuclear staining.

SELECT PRODUCT CITATIONS

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- Li, Z.Y., et al. 2011. Positive regulation of hepatic miR-122 expression by HNF4α. *J. Hepatol.* 55: 602-611.



Try **Pol II (CTD4H8): sc-47701** or **Pol II (F-12): sc-55492**, our highly recommended monoclonal alternatives to Pol II (C-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Pol II (CTD4H8): sc-47701**.