

# POLR3K (Y-12): sc-107955

## BACKGROUND

Eukaryotes produce 3 distinct classes of RNA polymerase, Pol I, II and III. Each polymerase is responsible for the synthesis of a different class of RNA. RNA polymerase III (Pol III) transcribes the 5S rRNA genes and all of the tRNA (transfer RNA) genes. POLR3K, also known as DNA-directed RNA polymerase III subunit RPC11, is a 108 amino acid nuclear protein that is one of the seventeen subunits that comprise Pol III. Specifically, POLR3K is a DNA-dependent RNA polymerase that uses the four ribonucleoside triphosphates to catalyze the transcription of DNA to RNA. The gene encoding POLR3K maps to human chromosome 16, which encodes over 900 genes in approximately 90 million base pairs and is associated with a variety of genetic disorders.

## REFERENCES

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## 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.

## CHROMOSOMAL LOCATION

Genetic locus: POLR3K (human) mapping to 16p13.3; Polr3k (mouse) mapping to 2 H4.

## SOURCE

POLR3K (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of POLR3K 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-107955 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-107955 X, 200 µg/0.1 ml.

## APPLICATIONS

POLR3K (Y-12) is recommended for detection of POLR3K 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).

Suitable for use as control antibody for POLR3K siRNA (h): sc-93095, POLR3K siRNA (m): sc-152382, POLR3K shRNA Plasmid (h): sc-93095-SH, POLR3K shRNA Plasmid (m): sc-152382-SH, POLR3K shRNA (h) Lentiviral Particles: sc-93095-V and POLR3K shRNA (m) Lentiviral Particles: sc-152382-V.

POLR3K (Y-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of POLR3K: 12 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 Blotting 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.