

POLR2B (S-20): sc-55039

BACKGROUND

RNA polymerase II (Pol II) is a multi-subunit complex responsible for catalyzing the transcription of DNA into RNA. POLR2B (polymerase (RNA) II (DNA directed) polypeptide B), also known as RPB2 (RNA polymerase II subunit B2), is a 1,174 amino acid protein that is the second largest subunit in the Pol II complex. POLR2B, along with the other Pol II subunits, uses the four ribonucleoside triphosphates as substrates to catalyze the transcription of DNA to RNA. Localized to the nucleus, POLR2B is one of at least three subunits that form a structure which is essential in maintaining contact between the active site of Pol II and the DNA template/newly synthesized RNA. In addition to POLR2B, this complex contains the central large cleft; a clamp element that opens and closes the cleft and functions to grab the incoming DNA template.

CHROMOSOMAL LOCATION

Genetic locus: POLR2B (human) mapping to 4q12; Polr2b (mouse) mapping to 5 C3.3.

SOURCE

POLR2B (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of POLR2B 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-55039 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

POLR2B (S-20) is recommended for detection of POLR2B 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).

POLR2B (S-20) is also recommended for detection of POLR2B in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for POLR2B siRNA (h): sc-62962, POLR2B siRNA (m): sc-62963, POLR2B shRNA Plasmid (h): sc-62962-SH, POLR2B shRNA Plasmid (m): sc-62963-SH, POLR2B shRNA (h) Lentiviral Particles: sc-62962-V and POLR2B shRNA (m) Lentiviral Particles: sc-62963-V.

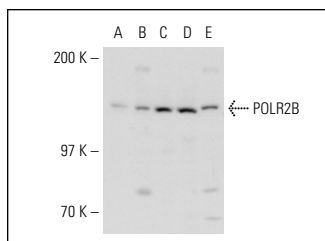
Molecular Weight of POLR2B: 134 kDa.

Positive Controls: IMR-32 nuclear extract: sc-2148, Jurkat nuclear extract: sc-2132 or Sol8 nuclear extract: sc-2157.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



POLR2B (S-20): sc-55039. Western blot analysis of POLR2B expression in HeLa (A), 3611-RF (B), IMR-32 (C), Jurkat (D) and Sol8 (E) nuclear extracts.

SELECT PRODUCT CITATIONS

- Boulon, S., et al. 2010. HSP90 and its R2TP/Prefoldin-like cochaperone are involved in the cytoplasmic assembly of RNA polymerase II. *Mol. Cell* 39: 912-924.
- Benbahouche Nel, H., et al. 2014. *Drosophila* Spag is the homolog of RNA polymerase II associated protein 3 (RPAP3), and recruits the heat shock proteins 70 and 90 (Hsp70 and Hsp90) during the assembly of cellular machineries. *J. Biol. Chem.* 289: 6236-6247.
- Perng, Y.C., et al. 2014. Human cytomegalovirus pUL79 is an elongation factor of RNA polymerase II for viral gene transcription. *PLoS Pathog.* 10: e1004350.

RESEARCH USE

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

PROTOCOLS

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

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Try **POLR2B (E-12): sc-166803**, our highly recommended monoclonal alternative to POLR2B (S-20).