

POLR2G (2781C2a): sc-81112

BACKGROUND

RNA polymerase II (Pol II) is a multi-subunit enzyme responsible for the transcription of protein-coding genes. Transcription initiation requires recruitment of the complete transcription machinery to a promoter via solicitation by activators and chromatin remodeling factors. Pol II can coordinate 10 to 14 subunits. This complex interacts with the promoter regions of genes and a variety of elements and transcription factors. POLR2G (DNA-directed RNA polymerase II subunit G), also known as RPB7, hRPB19 or hsRPB7, is the seventh largest subunit of RNA polymerase II. It is required for the transcription initiation phase of Pol II. POLR2G forms a subcomplex with the RPB4 subunit. This subcomplex protrudes from the Pol II core complex and, in the closed conformation, functions to prevent double stranded DNA from entering the active site.

REFERENCES

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3. Palangat, M., et al. 2004. Downstream DNA selectively affects a paused conformation of human RNA polymerase II. *J. Mol. Biol.* 341: 429-442.
4. Hirsch, H.A., et al. 2004. Distinct mechanisms for repression of RNA polymerase III transcription by the retinoblastoma tumor suppressor protein. *Mol. Cell. Biol.* 24: 5989-5999.
5. Zhong, S., et al. 2004. Epidermal growth factor enhances cellular TATA binding protein levels and induces RNA polymerase I- and III-dependent gene activity. *Mol. Cell. Biol.* 24: 5119-5129.
6. Cabart, P., et al. 2004. BRCA1 cooperates with NUFIP and P-TEFb to activate transcription by RNA polymerase II. *Oncogene* 23: 5316-5329.
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CHROMOSOMAL LOCATION

Genetic locus: POLR2G (human) mapping to 11q12.3; Polr2g (mouse) mapping to 19 A.

SOURCE

POLR2G (2781C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of POLR2G of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% BSA.

STORAGE

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

APPLICATIONS

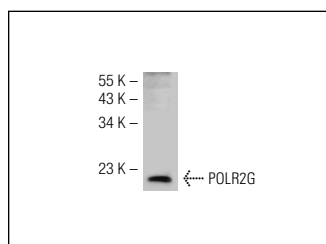
POLR2G (2781C2a) is recommended for detection of POLR2G of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for POLR2G siRNA (h): sc-96905, POLR2G siRNA (m): sc-77405, POLR2G shRNA Plasmid (h): sc-96905-SH, POLR2G shRNA Plasmid (m): sc-77405-SH, POLR2G shRNA (h) Lentiviral Particles: sc-96905-V and POLR2G shRNA (m) Lentiviral Particles: sc-77405-V.

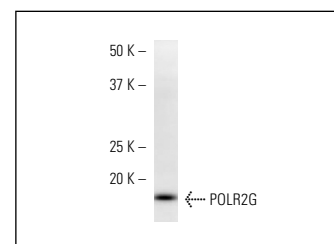
Molecular Weight of POLR2G: 19 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or HT-1080 whole cell lysate: sc-364183.

DATA



POLR2G (2781C2a): sc-81112. Western blot analysis of POLR2G expression in NIH/3T3 whole cell lysate.



POLR2G (2781C2a): sc-81112. Western Blot analysis of POLR2G expression in HT-1080 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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