

POLR2I (F-11): sc-398049

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. POLR2I (polymerase (RNA) II (DNA directed) polypeptide I), also known as RPB9 or hRPB14.5, is a 125 amino acid nuclear protein belonging to the archaeal rpoM/eukaryotic RPA12/RPB9/RPC11 RNA polymerase family. Component of RNA polymerase II, POLR2I catalyzes the transcription of DNA into RNA using the four ribonucleoside triphosphates as substrates. POLR2I is part of the upper jaw surrounding the central large cleft and is thought to grab the incoming DNA template.

REFERENCES

1. Acker, J., et al. 1993. Structure of the gene encoding the 14.5 kDa subunit of human RNA polymerase II. *Nucleic Acids Res.* 21: 5345-5350.
2. Acker, J., et al. 1994. Chromosomal localization of human RNA polymerase II subunit genes. *Genomics* 20: 496-499.
3. Online Mendelian Inheritance in Man, OMIM™. 1994. Johns Hopkins University, Baltimore, MD. MIM Number: 180662. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. McKune, K., et al. 1995. Six human RNA polymerase subunits functionally substitute for their yeast counterparts. *Mol. Cell. Biol.* 15: 6895-6900.

CHROMOSOMAL LOCATION

Genetic locus: POLR2I (human) mapping to 19q13.12; Polr2i (mouse) mapping to 7 B1.

SOURCE

POLR2I (F-11) is a mouse monoclonal antibody raised against amino acids 1-120 mapping at the N-terminus of POLR2I of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

POLR2I (F-11) is available conjugated to agarose (sc-398049 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398049 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398049 PE), fluorescein (sc-398049 FITC), Alexa Fluor® 488 (sc-398049 AF488), Alexa Fluor® 546 (sc-398049 AF546), Alexa Fluor® 594 (sc-398049 AF594) or Alexa Fluor® 647 (sc-398049 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398049 AF680) or Alexa Fluor® 790 (sc-398049 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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.

APPLICATIONS

POLR2I (F-11) is recommended for detection of POLR2I of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

POLR2I (F-11) is also recommended for detection of POLR2I in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for POLR2I siRNA (h): sc-97881, POLR2I siRNA (m): sc-152373, POLR2I shRNA Plasmid (h): sc-97881-SH, POLR2I shRNA Plasmid (m): sc-152373-SH, POLR2I shRNA (h) Lentiviral Particles: sc-97881-V and POLR2I shRNA (m) Lentiviral Particles: sc-152373-V.

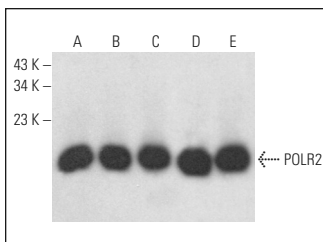
Molecular Weight of POLR2I: 15 kDa.

Positive Controls: A-673 cell lysate: sc-2414, Jurkat whole cell lysate: sc-2204 or NIH/3T3 whole cell lysate: sc-2210.

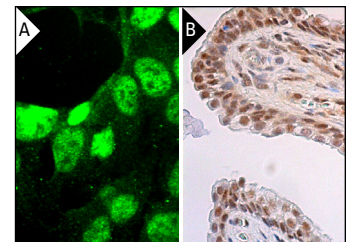
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



POLR2I (F-11): sc-398049. Western blot analysis of POLR2I expression in Jurkat (A), A-673 (B), A549 (C), NIH/3T3 (D) and TK-1 (E) whole cell lysates.



POLR2I (F-11): sc-398049. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing nuclear staining of glandular cells (B).

RESEARCH USE

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