

POLA2 (D-2): sc-398255

BACKGROUND

DNA polymerase α is an enzyme complex composed of four subunits: DNA primase large subunit, DNA primase small subunit and DNA polymerase subunits A and B. The complex is assembled during the cell cycle and is an essential component of DNA replication. POLA2, also known as DNA polymerase subunit α B, is a 598 amino acid member of the DNA polymerase α family of proteins. Incorporation of POLA2 into the four subunit enzyme complex is accomplished via the 250 amino acid N-terminal domain of the POLA2 protein. At the early stage of chromosomal DNA replication, POLA2 couples the primase/polymerase complex to the replication machinery. POLA2 is localized to the nucleus and may be phosphorylated at the G₂/M phase of the cell cycle.

CHROMOSOMAL LOCATION

Genetic locus: POLA2 (human) mapping to 11q13.1; Pola2 (mouse) mapping to 19 A.

SOURCE

POLA2 (D-2) is a mouse monoclonal antibody raised against amino acids 121-420 mapping within an internal region of POLA2 of human origin.

PRODUCT

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

POLA2 (D-2) is available conjugated to agarose (sc-398255 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398255 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398255 PE), fluorescein (sc-398255 FITC), Alexa Fluor® 488 (sc-398255 AF488), Alexa Fluor® 546 (sc-398255 AF546), Alexa Fluor® 594 (sc-398255 AF594) or Alexa Fluor® 647 (sc-398255 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398255 AF680) or Alexa Fluor® 790 (sc-398255 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

POLA2 (D-2) is recommended for detection of POLA2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for POLA2 siRNA (h): sc-96906, POLA2 siRNA (m): sc-152369, POLA2 shRNA Plasmid (h): sc-96906-SH, POLA2 shRNA Plasmid (m): sc-152369-SH, POLA2 shRNA (h) Lentiviral Particles: sc-96906-V and POLA2 shRNA (m) Lentiviral Particles: sc-152369-V.

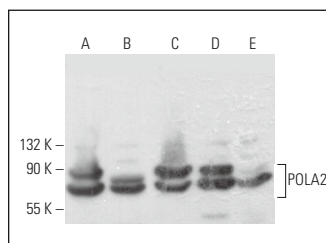
Molecular Weight of POLA2: 66 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, WI-38 whole cell lysate: sc-364260 or RT-4 whole cell lysate: sc-364257.

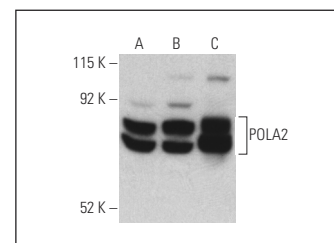
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



POLA2 (D-2): sc-398255. Western blot analysis of POLA2 expression in WI-38 (A), RT-4 (B), NIH/3T3 (C), RAW 264.7 (D) and 3611-RF (E) whole cell lysates.



POLA2 (D-2): sc-398255. Western blot analysis of POLA2 expression in T-47D (A), HeLa (B) and WI-38 (C) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.

SELECT PRODUCT CITATIONS

1. Tang, L., et al. 2019. DNA polymerase α is essential for intracellular amplification of hepatitis B virus covalently closed circular DNA. *PLoS Pathog.* 15: e1007742.
2. Yu, E.Y., et al. 2021. Reciprocal impacts of telomerase activity and ADNR/MES differentiation state in neuroblastoma tumor biology. *Commun. Biol.* 4: 1315.

STORAGE

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

PROTOCOLS

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

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