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# Produktinformation

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- Diagnostik & molekulare Diagnostik
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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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SANTA CRUZ BIOTECHNOLOGY, INC.

# $POLA_2$ siRNA (m): sc-152369

## 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. $POLA_2$, also known as DNA polymerase subunit α B, is a 598 amino acid member of the DNA polymerase α family of proteins. Incorporation of $POLA_2$ into the 4 subunit enzyme complex is accomplished via the 250 amino acid N-terminal domain of the $POLA_2$ protein. At the early stage of chromosomal DNA replication, $POLA_2$ couples the primase/polymerase complex to the replication machinery. $POLA_2$ is localized to the nucleus and may be phosphorylated at the $G_2$/M phase of the cell cycle.

## REFERENCES


1. Huang, D., et al. 2001. E2F mediates induction of the Sp1-controlled promoter of the human DNA polymerase ε B-subunit gene POLE2. Nucleic Acids Res. 29: 2810-2821.
2. Lee, J.B., et al. 2006. DNA primase acts as a molecular brake in DNA replication. Nature 439: 621-624.
3. Masuda, Y., et al. 2006. Role of single-stranded DNA in targeting REV1 to primer termini. J. Biol. Chem. 281: 24314-24321.
4. De Falco, M., et al. 2007. The human GINS complex binds to and specifically stimulates human DNA polymerase α-primase. EMBO Rep. 8: 99-103.
5. Shultz, R.W., et al. 2007. Genome-wide analysis of the core DNA replication machinery in the higher plants *Arabidopsis* and rice. Plant Physiol. 144: 1697-1714.
6. Berquist, B.R., et al. 2007. Essential and non-essential DNA replication genes in the model halophilic Archaeon, *Halobacterium sp.* NRC-1. BMC Genet. 8: 31.


## CHROMOSOMAL LOCATION

Genetic locus: Pola2 (mouse) mapping to 19 A.

## PRODUCT

$POLA_2$ siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see $POLA_2$ shRNA Plasmid (m): sc-152369-SH and $POLA_2$ shRNA (m) Lentiviral Particles: sc-152369-V as alternate gene silencing products.

For independent verification of $POLA_2$ (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-152369A, sc-152369B and sc-152369C.

## 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.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

$POLA_2$ siRNA (m) is recommended for the inhibition of $POLA_2$ expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

$POLA_2$ (D-2): sc-398255 is recommended as a control antibody for monitoring of POLA2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor $POLA_2$ gene expression knockdown using RT-PCR Primer: $POLA_2$ (m)-PR: sc-152369-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.