

## ARG45477 anti-DNA polymerase alpha / POLA antibody

Package: 50 µg  
Store at: -20°C

### Summary

|                     |   |
|---------------------|---|
| Product Description | Rabbit Polyclonal antibody recognizes DNA polymerase alpha / POLA   |
| Tested Reactivity   | Hu  |
| Tested Application  | FACS, ICC/IF, WB  |
| Specificity         | DNA polymerase alpha / POLA   |
| Host                | Rabbit  |
| Clonality           | Polyclonal  |
| Isotype             | IgG   |
| Target Name         | DNA polymerase alpha / POLA   |
| Species             | Human   |
| Immunogen           | Recombinant protein containing to human DNA polymerase alpha / POLA.  |
| Conjugation         | Un-conjugated   |
| Alternate Names     | POLA1; DNA Polymerase Alpha 1, Catalytic Subunit; P180; POLA; Polymerase (DNA) Alpha 1, Catalytic Subunit; DNA Polymerase Alpha Catalytic Subunit P180; DNA Polymerase Alpha Catalytic Subunit; EC 2.7.7.7 47; NSX; N Syndrome (Mental Retardation, Malformations, Chromosome Breakage); Polymerase (DNA Directed), Alpha 1, Catalytic Subunit; Polymerase (DNA-Directed), Alpha (70kD); Polymerase (DNA Directed), Alpha; VEODS; PDR |

### Application Instructions

|                   |  |                                |
|-------------------|--|--------------------------------|
| Application table | Application  | Dilution                       |
|                   | FACS   | 1 - 3 µg/10 <sup>6</sup> cells |
|                   | ICC/IF   | 5 µg/ml                        |
|                   | WB   | 0.1-0.25 µg/ml                 |
| Application Note  | * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist. |                                |
| Observed Size     | 180 kDa  |                                |

### Properties

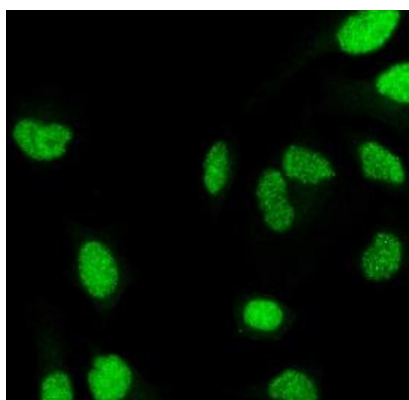
|               |   |
|---------------|---|
| Form          | Powder  |
| Purification  | Affinity purified   |
| Buffer        | 0.2% Na <sub>2</sub> HPO <sub>4</sub> , 0.9% NaCl and 4% Trehalose. |
| Stabilizer    | 4% Trehalose  |
| Concentration | 0.5 mg/ml   |

|                     |  |
|---------------------|--|
| Storage instruction | For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use. |
| Note                | For laboratory research only, not for drug, diagnostic or other use.   |

## Bioinformation

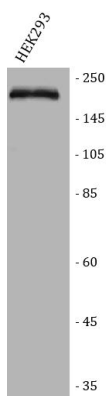
|                       |   |
|-----------------------|---|
| Gene Symbol           | POLA1   |
| Gene Full Name        | DNA Polymerase Alpha 1, Catalytic Subunit   |
| Background            | This gene encodes the catalytic subunit of DNA polymerase, which together with a regulatory and two primase subunits, forms the DNA polymerase alpha complex. The catalytic subunit plays an essential role in the initiation of DNA replication. [provided by RefSeq, Mar 2010]  |
| Function              | Catalytic subunit of the DNA polymerase alpha complex (also known as the alpha DNA polymerase-primase complex) which plays an essential role in the initiation of DNA synthesis. During the S phase of the cell cycle, the DNA polymerase alpha complex (composed of a catalytic subunit POLA1, a regulatory subunit POLA2 and two primase subunits PRIM1 and PRIM2) is recruited to DNA at the replicative forks via direct interactions with MCM10 and WDHD1. The primase subunit of the polymerase alpha complex initiates DNA synthesis by oligomerising short RNA primers on both leading and lagging strands. These primers are initially extended by the polymerase alpha catalytic subunit and subsequently transferred to polymerase delta and polymerase epsilon for processive synthesis on the lagging and leading strand, respectively. The reason this transfer occurs is because the polymerase alpha has limited processivity and lacks intrinsic 3' exonuclease activity for proofreading error, and therefore is not well suited for replicating long complexes. In the cytosol, responsible for a substantial proportion of the physiological concentration of cytosolic RNA:DNA hybrids, which are necessary to prevent spontaneous activation of type I interferon responses [UniProt] |
| Calculated Mw         | 166 kDa   |
| PTM                   | Acetylation; Phosphoprotein. [UniProt]  |
| Cellular Localization | Cytoplasm; Nucleus. [UniProt]   |

## Images



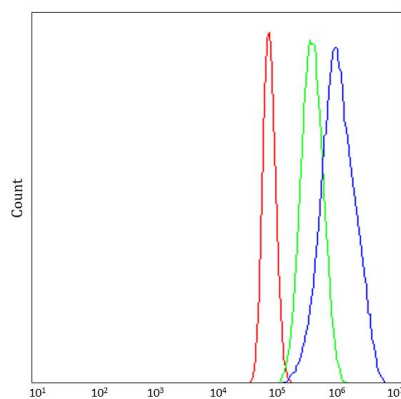
ARG45477 anti-DNA polymerase alpha / POLA antibody ICC/IF image

Immunofluorescence: HeLa stained with ARG45477 anti-DNA polymerase alpha / POLA antibody at 5 µg/ml dilution.



ARG45477 anti-DNA polymerase alpha/ POLA antibody WB image

Western blot: HEK293 stained with ARG45477 anti-DNA polymerase alpha / POLA antibody at 0.5  $\mu\text{g/ml}$  dilution.



ARG45477 anti-DNA polymerase alpha / POLA antibody FACS image

Flow Cytometry: U87 stained with ARG45477 anti-DNA polymerase alpha / POLA antibody at 1  $\mu\text{g}/10^6$  cells dilution.