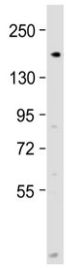
DNA Polymerase alpha Antibody / POLA1 (N-Terminal Region) (F54189)

Catalog No.	Formulation	Size
F54189-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54189-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P09884
Applications	Western Blot : 1:1000-1:2000
Limitations	This DNA Polymerase alpha antibody is available for research use only.



Western blot testing of human 293T/17 cell lysate with DNA Polymerase alpha antibody at 1:2000. Predicted molecular weight ~166 kDa, observed at ~180 kDa.

Description

Plays an essential role in the initiation of DNA replication. During the S phase of the cell cycle, the DNA polymerase alpha complex (composed of a catalytic subunit POLA1/p180, a regulatory subunit POLA2/p70 and two primase subunits PRIM1/p49 and PRIM2/p58) 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.

Application Notes

The stated application concentrations are suggested starting points. Titration of the DNA Polymerase alpha antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 1-33 from human POLA1 was used as the immunogen for the DNA Polymerase alpha antibody.

Storage

Aliquot the DNA Polymerase alpha antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.