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PRIM1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51446

Product Information

Application	WB
Primary Accession	P49642
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	49902

Additional Information

Gene ID	5557
Other Names	DNA primase small subunit, 277-, DNA primase 49 kDa subunit, p49, PRIM1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human PRIM1. The exact sequence is proprietary.
Dilution	WB~~ 1:1000
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	PRIM1
Function	Catalytic subunit of the DNA primase complex and component of the DNA polymerase alpha complex (also known as the alpha DNA polymerase-primase complex - primosome/replisome) which play an essential role in the initiation of DNA synthesis (PubMed:17893144, PubMed:24043831, PubMed:25550159, PubMed:26975377, PubMed:31479243, PubMed:33060134, PubMed:9268648, PubMed:9705292). During the S phase of the cell cycle, the DNA polymerase alpha complex (composed of a catalytic subunit POLA1, an accessory subunit POLA2 and two primase subunits, the catalytic subunit PRIM1 and the regulatory subunit PRIM2) is recruited to DNA at the replicative forks via direct interactions with MCM10 and WDHD1 (By similarity). The primase subunit of the polymerase alpha complex initiates DNA synthesis by oligomerising short RNA primers on both leading and lagging strands (PubMed:17893144). 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 (By similarity). In the primase

complex, both subunits are necessary for the initial di-nucleotide formation, but the extension of the primer depends only on the catalytic subunit (PubMed:17893144). Synthesizes 9-mer RNA primers (also known as the 'unit length' RNA primers). Incorporates only ribonucleotides in the presence of ribo- and deoxy-nucleotide triphosphates (rNTPs, dNTPs) (PubMed:26975377). Requires template thymine or cytidine to start the RNA primer synthesis, with an adenine or guanine at its 5'-end (PubMed:25550159, PubMed:26975377). Binds single stranded DNA (By similarity).

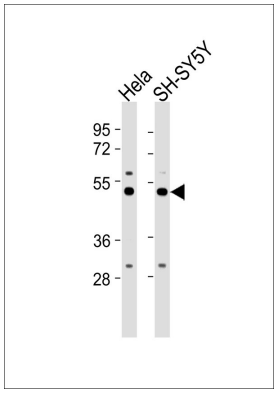
Background

DNA primase is the polymerase that synthesizes small RNA primers for the Okazaki fragments made during discontinuous DNA replication.

References

Stadlbauer F.,et al.Eur. J. Biochem. 222:781-793(1994).
Cloutier S.,et al.Genomics 43:398-401(1997).
Burkard T.R.,et al.BMC Syst. Biol. 5:17-17(2011).

Images



All lanes : Anti-PRIM1 Antibody at 1:1000 dilution Lane 1: Hela whole cell lysates Lane 2: SH-SY5Y whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.