

# PRIM1 (C-12): sc-162036

## BACKGROUND

In eukaryotic cells, the replication of DNA is carried out by a variety of proteins and requires a complex chromosomal replication structure, of which POLA2 (DNA polymerase alpha) and DNA primases (PRIMs) are key components. PRIM1 (DNA primase small subunit), also known as p49, is a 420 amino acid protein that exists as a heterodimer with PRIM2A, another DNA primase. Together, PRIM1 and PRIM2A function to synthesize small RNA primers that are required for the proper activity of Okazaki fragments during replication of the DNA lagging strand. Interestingly, the gene encoding PRIM1 is coamplified with other core 12q13 amplicon genes in human osteosarcoma. In the retina of zebrafish, mutations in PRIM1 were observed to not affect cell proliferation, though neuronal apoptosis was induced. It is likely that such mutations in PRIM1 leads to activation of the ATM-Chk2-p53 apoptotic pathway.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: PRIM1 (human) mapping to 12q13.3; Prim1 (mouse) mapping to 10 D3.

## SOURCE

PRIM1 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PRIM1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162036 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PRIM1 (C-12) is recommended for detection of PRIM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with PRIM2A.

PRIM1 (C-12) is also recommended for detection of PRIM1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PRIM1 siRNA (h): sc-95796, PRIM1 siRNA (m): sc-152465, PRIM1 shRNA Plasmid (h): sc-95796-SH, PRIM1 shRNA Plasmid (m): sc-152465-SH, PRIM1 shRNA (h) Lentiviral Particles: sc-95796-V and PRIM1 shRNA (m) Lentiviral Particles: sc-152465-V.

Molecular Weight of PRIM1: 49 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **PRIM1 (H-9): sc-390265**, our highly recommended monoclonal alternative to PRIM1 (C-12).