

RPA 32 kDa subunit (H-100): sc-28709

BACKGROUND

The single-stranded-DNA-binding proteins (SSBs) are essential for DNA function in prokaryotic and eukaryotic cells, mitochondria, phages and viruses. Replication protein A (RPA), a highly conserved eukaryotic protein, is a heterotrimeric SSB. RPA plays an important role in DNA replication, recombination and repair. The binding of human RPA (hRPA) to DNA involves molecular polarity, in which initial hRPA binding occurs on the 5' side of a ssDNA substrate and then extends in the 3' direction to create a stably bound hRPA. RPA is one of the major damage-recognition proteins involved in the early stage of nucleotide excision repair. RPA can also play a role in telomere maintenance. The C-terminus of RPA32 can specifically interact with the DNA repair enzyme UNG2 and repair factors XPA and RAD52, each of which functions in a different repair pathway. In addition, RPA32 specifically to the SH2 domain of Stat3 *in vivo*, and overexpression of RPA32 corresponds to the augmented growth factor-stimulated tyrosine phosphorylation and transcription activities of Stat3.

CHROMOSOMAL LOCATION

Genetic locus: RPA2 (human) mapping to 1p35.3; Rpa2 (mouse) mapping to 4 D2.3.

SOURCE

RPA 32 kDa subunit (H-100) is a rabbit polyclonal antibody raised against amino acids 155-254 mapping within an internal region of RPA 32 kDa subunit of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-28709 X, 200 µg/0.1 ml.

APPLICATIONS

RPA 32 kDa subunit (H-100) is recommended for detection of RPA 32 kDa subunit of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

RPA 32 kDa subunit (H-100) is also recommended for detection of RPA 32 kDa subunit in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RPA 32 kDa subunit siRNA (h): sc-38229, RPA 32 kDa subunit siRNA (m): sc-38230, RPA 32 kDa subunit shRNA Plasmid (h): sc-38229-SH, RPA 32 kDa subunit shRNA Plasmid (m): sc-38230-SH, RPA 32 kDa subunit shRNA (h) Lentiviral Particles: sc-38229-V and RPA 32 kDa subunit shRNA (m) Lentiviral Particles: sc-38230-V.

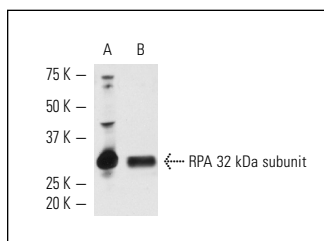
RPA 32 kDa subunit (P-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RPA 32 kDa subunit: 32 kDa.

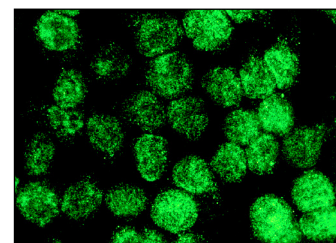
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



RPA 32 kDa subunit (H-100): sc-28709. Western blot analysis of RPA 32 kDa subunit expression in H69AR (A) and HeLa (B) whole cell lysates.



RPA 32 kDa subunit (H-100): sc-28709. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Johnson, M., et al. 2011. IQGAP1 translocates to the nucleus in early S-phase and contributes to cell cycle progression after DNA replication arrest. *Int. J. Biochem. Cell Biol.* 43: 65-73.
- Liu, R.Y., et al. 2011. Role of eIF3a in regulating cisplatin sensitivity and in translational control of nucleotide excision repair of nasopharyngeal carcinoma. *Oncogene* 30: 4814-4823.

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 or our catalog for detailed protocols and support products.



Try **RPA 32 kDa subunit (9H8): sc-56770** or **RPA 32 kDa subunit (B-4): sc-271578**, our highly recommended monoclonal alternatives to RPA 32 kDa subunit (H-100). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **RPA 32 kDa subunit (9H8): sc-56770**.