

SMC5 (H-190): sc-134544

BACKGROUND

Breaks in double stranded DNA often arise during DNA replication or as a result of exposure to DNA-damaging agents. Quick and accurate repair of these breaks is crucial for cell survival and genomic stability. Structural maintenance of chromosomes (SMC) family members form heterodimeric complexes that modulate sister chromatid cohesion and chromosome condensation during mitosis. Two distinct SMC protein complexes are the SMC1/SMC3 heterodimer and the SMC2/SMC4 heterodimer. SMC5 and SMC6 play a crucial role in DNA repair as they form a complex that along with SUMO ligase, is also important in preventing DNA damage-induced apoptosis. This complex made up of SMC5 and SMC6 is crucial for sister chromatid homologous recombination DNA repair and also for prevention of chromosomal rearrangements.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SMC5 (human) mapping to 9q21.12; Smc5 (mouse) mapping to 19 B.

SOURCE

SMC5 (H-190) is a rabbit polyclonal antibody raised against amino acids 901-1090 mapping near the C-terminus of SMC5 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-134544 X, 200 µg/0.1 ml.

APPLICATIONS

SMC5 (H-190) is recommended for detection of SMC5 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).

SMC5 (H-190) is also recommended for detection of SMC5 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for SMC5 siRNA (h): sc-61563, SMC5 siRNA (m): sc-61564, SMC5 shRNA Plasmid (h): sc-61563-SH, SMC5 shRNA Plasmid (m): sc-61564-SH, SMC5 shRNA (h) Lentiviral Particles: sc-61563-V and SMC5 shRNA (m) Lentiviral Particles: sc-61564-V.

SMC5 (H-190) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of SMC5: 120 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.

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.