SANTA CRUZ BIOTECHNOLOGY, INC.

SHPRH (E-10): sc-514395



BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). SHPRH (SNF2 histone linker PHD RING helicase) is a 1,683 amino acid protein that contains one RING-type zinc finger, one PHD-type zinc finger, one Histone H1 domain and one helicase C-ternimal and ATP-binding domain. Expressed in a broad range of tissues and existing as a homodimer, SHPRH functions as an E3 ubiquitin-protein ligase that is involved in DNA repair mechanisms. Human SHPRH exists as multiple alternatively spliced isoforms and shares 86% amino acid identity with its mouse counterpart, suggesting a conserved role between species.

REFERENCES

- 1. Sood, R., et al. 2003. Cloning and characterization of a novel gene, SHPRH, encoding a conserved putative protein with SNF2/helicase and PHD-finger domains from the 6q24 region. Genomics 82: 153-161.
- Motegi, A., et al. 2006. Human SHPRH suppresses genomic instability through proliferating cell nuclear antigen polyubiquitination. J. Cell Biol. 175: 703-708.

CHROMOSOMAL LOCATION

Genetic locus: SHPRH (human) mapping to 6q24.3; Shprh (mouse) mapping to 10 A1.

SOURCE

SHPRH (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 777-806 within an internal region of SHPRH of human origin.

PRODUCT

Each vial contains 200 μ g lgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-514395 X, 200 μ g/0.1 ml.

SHPRH (E-10) is available conjugated to agarose (sc-514395 AC), 500 μg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514395 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514395 PE), fluorescein (sc-514395 FITC), Alexa Fluor® 488 (sc-514395 AF488), Alexa Fluor® 546 (sc-514395 AF546), Alexa Fluor® 594 (sc-514395 AF594) or Alexa Fluor® 647 (sc-514395 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514395 AF680) or Alexa Fluor® 790 (sc-514395 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514395 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

SHPRH (E-10) is recommended for detection of SHPRH of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for SHPRH siRNA (h): sc-76493, SHPRH siRNA (m): sc-76494, SHPRH shRNA Plasmid (h): sc-76493-SH, SHPRH shRNA Plasmid (m): sc-76494-SH, SHPRH shRNA (h) Lentiviral Particles: sc-76493-V and SHPRH shRNA (m) Lentiviral Particles: sc-76494-V.

SHPRH (E-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of SHPRH: 200 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA





SHPRH (E-10): sc-514395. Western blot analysis of SHPRH expression in HeLa (**A**), SH-SY5Y (**B**), T98G (**C**), Jurkat (**D**) and K-562 (**E**) whole cell lysates. SHPRH (E-10): sc-514395. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

 Miller, A.K., et al. 2022. Rad5 and its human homologs, HLTF and SHPRH, are novel interactors of mismatch repair. Front. Cell Dev. Biol. 10: 843121.

STORAGE

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