

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-terminal 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

- 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 µg IgG₁ 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 µg/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 µg 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 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).

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.

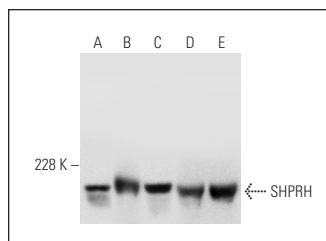
Molecular Weight of SHPRH: 200 kDa.

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

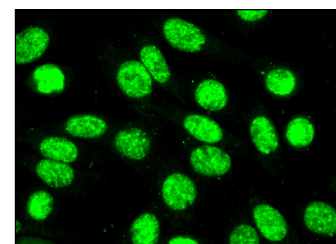
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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, HLF1 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.