

UHRF1 (H-8): sc-373750

BACKGROUND

UHRF1 (ubiquitin-like, containing PHD and RING finger domains, 1), also known as Np95 (nuclear zinc finger protein 95), ICBP90 (inverted CCAAT box-binding protein of 90 kDa) or RNF106, is a transcription and cell cycle regulator belonging to the RING-finger type E3 ubiquitin ligase subfamily. UHRF1 is expressed in bone marrow, thymus, heart, testis and lung, and contains one PHD-type zinc finger, a ubiquitin-like domain, two RING-type zinc fingers and one YDG/SRA domain. Localizing to the nucleus, UHRF1 is believed to function as an E3 ubiquitin-protein ligase that accepts a ubiquitin residue from an E2 ubiquitin-conjugating enzyme and immediately transfers that residue to a protein that is targeted for degradation. By mediating ubiquitination, UHRF1 plays an important role in cellular proliferation. In addition, UHRF1 directly interacts with Dnmt1 (a maintenance DNA methyltransferase) and is required for the stable association of Dnmt1 with chromatin. UHRF1 is overexpressed in cancer cells, suggesting a possible role in carcinogenesis.

REFERENCES

- Hopfner, R., et al. 2000. ICBP90, a novel human CCAAT binding protein, involved in the regulation of topoisomerase II α expression. *Cancer Res.* 60: 121-128.
- Muto, M., et al. 2002. Targeted disruption of Np95 gene renders murine embryonic stem cells hypersensitive to DNA damaging agents and DNA replication blocks. *J. Biol. Chem.* 277: 34549-34555.

CHROMOSOMAL LOCATION

Genetic locus: UHRF1 (human) mapping to 19p13.3; Uhrf1 (mouse) mapping to 17 D.

SOURCE

UHRF1 (H-8) is a mouse monoclonal antibody raised against amino acids 586-717 mapping near the C-terminus of UHRF1 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

UHRF1 (H-8) is available conjugated to agarose (sc-373750 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373750 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373750 PE), fluorescein (sc-373750 FITC), Alexa Fluor[®] 488 (sc-373750 AF488), Alexa Fluor[®] 546 (sc-373750 AF546), Alexa Fluor[®] 594 (sc-373750 AF594) or Alexa Fluor[®] 647 (sc-373750 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-373750 AF680) or Alexa Fluor[®] 790 (sc-373750 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

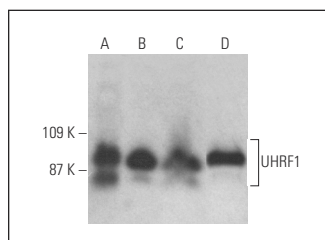
UHRF1 (H-8) is recommended for detection of UHRF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 UHRF1 siRNA (h): sc-76805, UHRF1 siRNA (m): sc-155976, UHRF1 shRNA Plasmid (h): sc-76805-SH, UHRF1 shRNA Plasmid (m): sc-155976-SH, UHRF1 shRNA (h) Lentiviral Particles: sc-76805-V and UHRF1 shRNA (m) Lentiviral Particles: sc-155976-V.

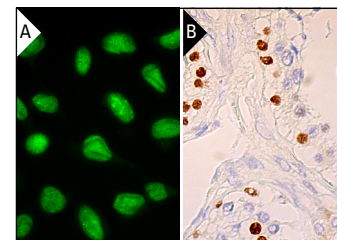
Molecular Weight of UHRF1: 90 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, HeLa nuclear extract: sc-2120 or C6 whole cell lysate: sc-364373.

DATA



UHRF1 (H-8) HRP: sc-373750 HRP. Direct western blot analysis of UHRF1 expression in HeLa nuclear extract (A) and F9 (B), C6 (C) and MDA-MB-231 (D) whole cell lysates.



UHRF1 (H-8): sc-373750. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of subset of cells in seminiferous ducts (B).

SELECT PRODUCT CITATIONS

- Dai, C., et al. 2013. Negative regulation of the acetyltransferase TIP60-p53 interplay by UHRF1 (ubiquitin-like with PHD and RING finger domains 1). *J. Biol. Chem.* 288: 19581-19592.
- Carter, D.M., et al. 2015. Proteomic identification of nuclear processes manipulated by cytomegalovirus early during infection. *Proteomics* 15: 1995-2005.
- Liang, C.C., et al. 2016. The FANCD2-FANCI complex is recruited to DNA interstrand crosslinks before monoubiquitination of FANCD2. *Nat. Commun.* 7: 12124.
- Turnbull, A.P., et al. 2017. Molecular basis of USP7 inhibition by selective small-molecule inhibitors. *Nature* 550: 481-486.
- Li, T., et al. 2018. Structural and mechanistic insights into UHRF1-mediated DNMT1 activation in the maintenance DNA methylation. *Nucleic Acids Res.* 46: 3218-3231.

RESEARCH USE

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