

UHRF1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP8846c

Product Information

Application	FC, IF, WB, E
Primary Accession	Q96T88
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	89814
Antigen Region	229-257

Additional Information

Gene ID	29128
Other Names	E3 ubiquitin-protein ligase UHRF1, 632-, Inverted CCAAT box-binding protein of 90 kDa, Nuclear protein 95, Nuclear zinc finger protein Np95, HuNp95, hNp95, RING finger protein 106, Transcription factor ICBP90, Ubiquitin-like PHD and RING finger domain-containing protein 1, hUHRF1, Ubiquitin-like-containing PHD and RING finger domains protein 1, UHRF1, ICBP90, NP95, RNF106
Target/Specificity	This UHRF1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 229-257 amino acids from the Central region of human UHRF1.
Dilution	FC~~1:10~50 IF~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	UHRF1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	UHRF1
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Synonyms	ICBP90, NP95, RNF106
Function	Multidomain protein that acts as a key epigenetic regulator by bridging DNA methylation and chromatin modification. Specifically recognizes and binds hemimethylated DNA at replication forks via its YDG domain and recruits DNMT1 methyltransferase to ensure faithful propagation of the DNA methylation patterns through DNA replication. In addition to its role in maintenance of DNA methylation, also plays a key role in chromatin modification: through its tudor-like regions and PHD-type zinc fingers, specifically recognizes and binds histone H3 trimethylated at 'Lys-9' (H3K9me3) and unmethylated at 'Arg-2' (H3R2me0), respectively, and recruits chromatin proteins. Enriched in pericentric heterochromatin where it recruits different chromatin modifiers required for this chromatin replication. Also localizes to euchromatic regions where it negatively regulates transcription possibly by impacting DNA methylation and histone modifications. Has E3 ubiquitin-protein ligase activity by mediating the ubiquitination of target proteins such as histone H3 and PML. It is still unclear how E3 ubiquitin-protein ligase activity is related to its role in chromatin in vivo. Plays a role in DNA repair by cooperating with UHRF2 to ensure recruitment of FANCD2 to interstrand cross-links (ICLs) leading to FANCD2 activation. Acts as a critical player of proper spindle architecture by catalyzing the 'Lys-63'-linked ubiquitination of KIF11, thereby controlling KIF11 localization on the spindle (PubMed: 37728657).
Cellular Location	Nucleus {ECO:0000255 PROSITE-ProRule:PRU00358, ECO:0000269 PubMed:10646863, ECO:0000269 PubMed:17673620, ECO:0000269 PubMed:17967883, ECO:0000269 PubMed:19056828, ECO:0000269 PubMed:21777816, ECO:0000269 PubMed:30335751} Note=Associated, through the YDG domain (also called SRA domain), with replicating DNA from early to late S phase, including at replicating pericentric heterochromatin (By similarity). Also localizes to euchromatic regions. In non-S-phase cells, homogenously distributed through the nucleus (By similarity). {ECO:0000250 UniProtKB:Q8VDF2}
Tissue Location	Expressed in thymus, bone marrow, testis, lung and heart. Overexpressed in breast cancer.

Background

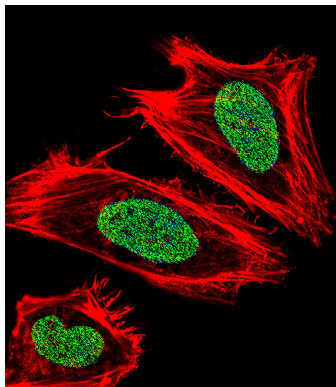
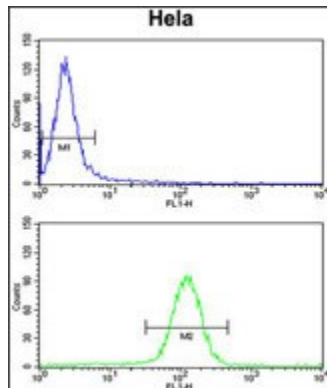
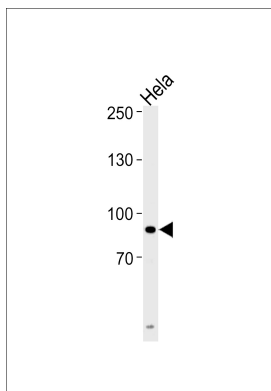
UHRF1 is a member of a subfamily of RING-finger type E3 ubiquitin ligases. The protein binds to specific DNA sequences, and recruits a histone acetylase to regulate gene expression. Its expression peaks at late G1 phase and continues during G2 and M phases of the cell cycle. It plays a major role in the G1/S transition by regulating topoisomerase IIalpha and retinoblastoma gene expression, and functions in the p53-dependent DNA damage checkpoint.

References

Achour,M.,et.al., Biochem. Biophys. Res. Commun. 390 (3), 523-528 (2009)

Images

UHRF1 Antibody (Center) (Cat. #AP8846c) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the UHRF1 antibody detected the UHRF1 protein (arrow).



UHRF1 Antibody (Center) (Cat.#AP8846c) flow cytometry analysis of HeLa cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Fluorescent confocal image of HeLa cell stained with UHRF1 Antibody (Center)(Cat#AP8846c).HeLa cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with UHRF1 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). UHRF1 immunoreactivity is localized to Nucleus significantly.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.