

# Anti-UHRF1 Antibody

Rabbit polyclonal antibody to UHRF1  
Catalog # AP59835

## Product Information

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|-------------------|------------------------|
| Application       | WB                     |
| Primary Accession | <a href="#">Q96T88</a> |
| Reactivity        | Human                  |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 89814                  |

## Additional Information

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|--------------------|---|
| Gene ID            | 29128   |
| Other Names        | ICBP90; NP95; RNF106; E3 ubiquitin-protein ligase UHRF1; 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 |
| Target/Specificity | KLH-conjugated synthetic peptide encompassing a sequence within the center region of human UHRF1. The exact sequence is proprietary.  |
| Dilution           | WB--WB (1/500 - 1/1000)   |
| Format             | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.   |
| Storage            | Store at -20 °C. Stable for 12 months from date of receipt  |

## Protein Information

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| Name     | UHRF1 {ECO:0000303 PubMed:17673620, ECO:0000312 HGNC:HGNC:12556}  |
| Function | E3 ubiquitin-protein ligase that acts as a key epigenetic regulator by bridging DNA methylation and chromatin modification (PubMed: <a href="#">10646863</a> , PubMed: <a href="#">15009091</a> , PubMed: <a href="#">19056828</a> , PubMed: <a href="#">23022729</a> , PubMed: <a href="#">24013172</a> , PubMed: <a href="#">27595565</a> , PubMed: <a href="#">30104358</a> , PubMed: <a href="#">30392929</a> , PubMed: <a href="#">30392931</a> , PubMed: <a href="#">39607687</a> ). Plays a key role in DNA methylation inheritance by promoting recruitment of DNMT1 to hemimethylated DNA and ensure faithful propagation of the DNA methylation patterns through DNA replication (PubMed: <a href="#">23022729</a> , PubMed: <a href="#">24013172</a> , PubMed: <a href="#">27595565</a> , PubMed: <a href="#">30104358</a> , PubMed: <a href="#">30392929</a> , PubMed: <a href="#">30392931</a> , PubMed: <a href="#">39607687</a> ). Acts both as a histone reader and |

writer: specifically recognizes and binds (1) hemimethylated DNA at replication forks and (2) histone H3 trimethylated at 'Lys-9' and unmethylated at 'Arg-2' (H3K9me3 and H3R2me0, respectively), thereby activating its E3 ubiquitin-protein ligase activity (PubMed:[15361834](#), PubMed:[17673620](#), PubMed:[17967883](#), PubMed:[18772889](#), PubMed:[21745816](#), PubMed:[21777816](#), PubMed:[22100450](#), PubMed:[22837395](#), PubMed:[23022729](#), PubMed:[27595565](#), PubMed:[30104358](#)). UHRF1 then mediates histone H3 'Lys-18' monoubiquitination (H3K18ub), a docking site for DNMT1, leading to DNMT1 recruitment and replication-coupled DNA methylation maintenance (PubMed:[27595565](#)). Also mediates histone H3 'Lys-14' and 'Lys-23' ubiquitination (H3K14ub and H3K23ub) at lower level (PubMed:[24013172](#), PubMed:[27595565](#)). Histone ubiquitin ligase activity also stimulates the methyltransferase activity of SUV39H1 and/or SUV39H2, promoting accumulation of H3K9me3 histone mark to reinforce heterochromatin state (PubMed:[39631394](#)). 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 (PubMed:[21777816](#)). Plays a role in DNA repair by cooperating with UHRF2 to ensure recruitment of FANCD2 to interstrand cross-links (ICLs) leading to FANCD2 activation (PubMed:[30335751](#)). Also ubiquitinates non-histone proteins, such as histone H3, KIF11 and PML (PubMed:[22945642](#), PubMed:[37728657](#)). 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}. Chromosome Note=Associated with replicating DNA from early to late S phase, including at replicating pericentric heterochromatin (PubMed:17673620) Also localizes to euchromatic regions (PubMed:21777816). In non-S-phase cells, homogeneously distributed through the nucleus (By similarity) {ECO:0000250 | UniProtKB:Q8VDF2, ECO:0000269 | PubMed:17673620, ECO:0000269 | PubMed:21777816}

#### Tissue Location

Expressed in thymus, bone marrow, testis, lung and heart. Overexpressed in breast cancer.

## Background

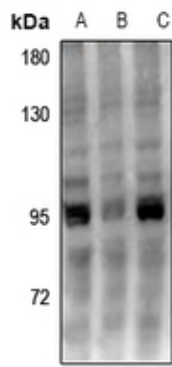
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KLH-conjugated synthetic peptide encompassing a sequence within the center region of human UHRF1. The exact sequence is proprietary.

## Images

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Western blot analysis of UHRF1 expression in HCT116 (A), H1792 (B), A549 (C) whole cell lysates.



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