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# (Mouse) Uhrf1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21204b

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | Q8VDF2 |
| **Reactivity** | Mouse |
| **Host** | Rabbit |
| **Clonality** | polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB51453 |
| **Calculated MW** | 88304 |

## Additional Information

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| **Gene ID** | 18140 |
| **Other Names** | E3 ubiquitin-protein ligase UHRF1, 632-, Nuclear protein 95, Nuclear zinc finger protein Np95, Ubiquitin-like PHD and RING finger domain-containing protein 1, mUhrf1, Ubiquitin-like-containing PHD and RING finger domains protein 1, Uhrf1, Np95 |
| **Target/Specificity** | This Mouse Uhrf1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 596-628 amino acids from the C-terminal region of Mouse Uhrf1. |
| **Dilution** | WB~~1:2000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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** | (Mouse) Uhrf1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | Uhrf1 |
| **Synonyms** | Np95 |
| **Function** | Multidomain protein that acts as a key epigenetic regulator by bridging DNA |

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| | 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. Plays a pivotal role in the establishment of correct spindle architecture by catalyzing the 'Lys-63'-linked ubiquitination of KIF11, thereby controlling KIF11 localization on the spindle. |
| **Cellular Location** | Nucleus {ECO:0000255\|PROSITE-ProRule:PRU00358, ECO:0000269\|PubMed:10984098, ECO:0000269\|PubMed:11161719, ECO:0000269\|PubMed:14993289, ECO:0000269\|PubMed:17994007, ECO:0000269\|PubMed:21489993, ECO:0000269\|PubMed:36056023, ECO:0000269\|PubMed:8634372}. Note=Associated, through the YDG domain (also called SRA domain), with replicating DNA from early to late S phase, including at replicating pericentric heterochromatin (PubMed:36056023). Also localizes to euchromatic regions. In non-S- phase cells, homogenously distributed through the nucleus (PubMed:36056023). |
| **Tissue Location** | Expressed in thymus, testis, spleen and lung. Within testis, expressed in almost all cells except elongated spermatids. |

## Background

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. May be involved in DNA repair.

## References


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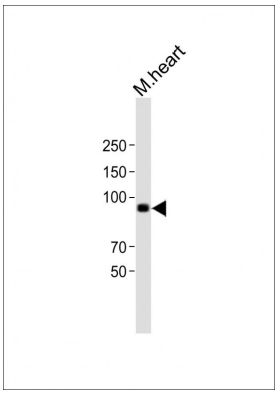
Church D.M.,et al.PLoS Biol. 7:E1000112-E1000112(2009).
Muto M.,et al.J. Biol. Chem. 277:34549-34555(2002).

## Images




All lanes: Anti-FGFR1(Y307)Antibody at 1:500 dilution + Mouse heart lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 90 KDa Blocking/Dilution buffer: 5% NFDM/TBST.