

Rabbit UHRF1 Polyclonal Antibody | anti-UHRF1 antibody

Phospho-UHRF1 (Ser311) Antibody

CATALOG # AAA329231	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunohistochemistry
-------------------------------	-----------------------	--	--

PRODUCT SYNONYMS

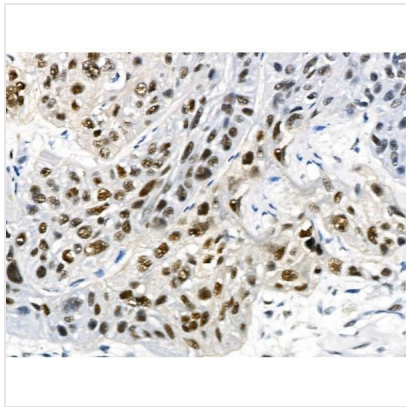
UHRF1; Polyclonal Antibody; Phospho-UHRF1 (Ser311) Antibody; Ac2-121; AL022808; E3 ubiquitin-protein ligase UHRF1; EC 6.3.2.-; FLJ21925; hNP95; hUHRF1; HuNp95; ICBP90; Inverted CCAAT box binding protein of 90kDa; Inverted CCAAT box binding protein; 90-kD; Inverted CCAAT box-binding protein of 90kDa; Liver regeneration-related protein LRRG126; MGC138707; NP95; Nuclear phosphoprotein 95; Nuclear phosphoprotein; 95-KD; Nuclear protein 95; Nuclear zinc finger protein Np95; RING finger protein 106; RNF106; TDRD22; Transcription factor ICBP90; Ubiquitin like containing PHD and RING finger domains protein 1; Ubiquitin like PHD and RING finger domain containing protein 1; Ubiquitin-like PHD and RING finger domain-containing protein 1; Ubiquitin-like protein containing PHD and RING finger domains 1; Ubiquitin-like with PHD and ring finger domains 1; Ubiquitin-like; containing PHD and RING finger domains; 1; Ubiquitin-like-containing PHD and RING finger domains protein 1; UHRF1_HUMAN; anti-UHRF1 antibody

PRODUCT SPECIFICATIONS

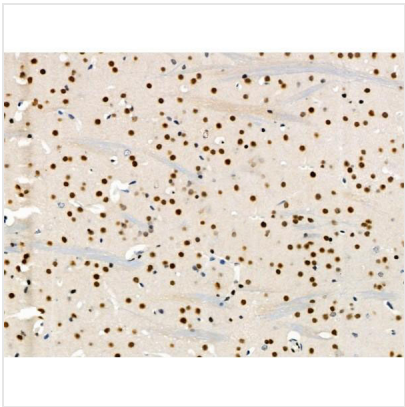
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-UHRF1 (Ser311) Antibody detects endogenous levels of UHRF1 only when phosphorylated at Ser311. Tissue Specificity: Expressed in thymus, bone marrow, testis, lung and heart. Overexpressed in breast cancer.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-UHRF1 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry)
Immunogen	A synthesized peptide derived from human UHRF1 around the phosphorylation site of Ser311.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylation at Ser-298 of the linker region decreases the binding to H3K9me3. Phosphorylation at Ser-639 by CDK1 during M phase impairs interaction with USP7, preventing deubiquitination and leading to degradation by the proteasome. Ubiquitinated; which leads to proteasomal degradation. Autoubiquitinated; interaction with USP7 leads to deubiquitination and prevents degradation. Ubiquitination and degradation takes place during M phase, when phosphorylation at Ser-639 prevents interaction with USP7 and subsequent deubiquitination. Polyubiquitination may be stimulated by DNA damage.
Subunit Structure	Interacts with DNMT3A and DNMT3B (By similarity). Interacts with DNMT1; the interaction is direct. Interacts with USP7; leading to its deubiquitination. Interacts with histone H3. Interacts with HDAC1, but not with HDAC2. Interacts with UHRF1BP1. Interacts with PML. Interacts with EHMT2. Binds hemimethylated CpG containing oligonucleotides.

Similarity	The tudor-like regions specifically recognize and bind histone H3 unmethylated at 'Arg-2' (H3R2me0), while the PHD-type zinc finger specifically recognizes and binds histone H3 trimethylated at 'Lys-9' (H3K9me3). The tudor-like regions simultaneously recognizes H3K9me3 through a conserved aromatic cage in the first tudor-like subdomain and unmodified H3K4 (H3K4me0) within a groove between the tandem subdomains (PubMed:21489993, PubMed:21777816 and PubMed:22100450). The linker region plays a role in the formation of a histone H3-binding hole between the reader modules formed by the tudor-like regions and the PHD-type zinc finger by making extended contacts with the tandem tudor-like regions (PubMed:22837395).The YDG domain (also named SRA domain) specifically recognizes and binds hemimethylated DNA at replication forks (DNA that is only methylated on the mother strand of replicating DNA) (PubMed:17673620). It contains a binding pocket that accommodates the 5-methylcytosine that is flipped out of the duplex DNA. 2 specialized loops reach through the resulting gap in the DNA from both the major and the minor grooves to read the other 3 bases of the CpG duplex. The major groove loop confers both specificity for the CpG dinucleotide and discrimination against methylation of deoxycytidine of the complementary strand (PubMed:18772889). The YDG domain also recognizes and binds 5-hydroxymethylcytosine (5hmC) (PubMed:21731699).The RING finger is required for ubiquitin ligase activity.
Subcellular Location	Nucleus. Note: Localizes to replication foci. Enriched in pericentric heterochromatin. Also localizes to euchromatic regions.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

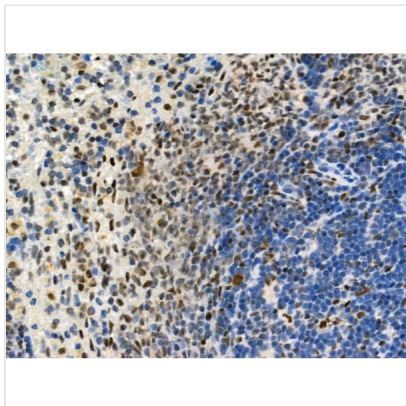
IMAGES



IHC (Immunohistochemisry)
 At 1/100 staining Human esophageal cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)
 Staining Mouse brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)
 At 1/100 staining Rat spleen tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-UHRF1 antibody	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.
---	--

NCBI AND UNIPROT INFORMATION

NCBI GI #	115430235
NCBI GeneID	29128
NCBI Accession #	NP_001041666.1
NCBI GenBank Nucleotide #	NM_001048201.1
UniProt Accession #	Q96T88; Q2HIX7; Q8J022; Q9H6S6; Q9P115; Q9P1U7; A0JBR2; A8K024; B2RBA9
Molecular Weight	Observed Molecular Weight The band size is ~90kDa
NCBI Official Full Name	E3 ubiquitin-protein ligase UHRF1 isoform 1
NCBI Official Synonym Full Names	ubiquitin-like with PHD and ring finger domains 1
NCBI Official Symbol	UHRF1
NCBI Official Synonym Symbols	Np95; hNP95; ICBP90; RNF106; hUHRF1
NCBI Protein Information	E3 ubiquitin-protein ligase UHRF1; huNp95; nuclear protein 95; RING finger protein 106; transcription factor ICBP90; nuclear zinc finger protein Np95; inverted CCAAT box-binding protein of 90 kDa; ubiquitin-like, containing PHD and RING finger domains, 1;
UniProt Protein Name	E3 ubiquitin-protein ligase UHRF1
UniProt Gene Name	UHRF1
UniProt Synonym Gene Names	ICBP90; NP95; RNF106; HuNp95; hNp95; hUHRF1
UniProt Entry Name	UHRF1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.