

# HLTF Rabbit mAb

Catalog # AP77050

## Product Information

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<b>Application</b>	WB, IHC-P, IF, ICC
<b>Primary Accession</b>	<a href="#">Q14527</a>
<b>Reactivity</b>	Rat, Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Immunogen</b>	A synthesized peptide derived from human HLTF
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	113929

## Additional Information

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<b>Gene ID</b>	6596
<b>Other Names</b>	HLTF
<b>Dilution</b>	WB~~1/500-1/1000 IHC-P~~N/A IF~~1:50~200 ICC~~N/A
<b>Format</b>	Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	HLTF ( <a href="#">HGNC:11099</a> )
<b>Function</b>	Functions as a DNA-dependent ATPase and E3 ubiquitin-protein ligase involved in chromatin regulation and DNA damage tolerance (DDT) (PubMed: <a href="#">18316726</a> , PubMed: <a href="#">18719106</a> , PubMed: <a href="#">26051180</a> , PubMed: <a href="#">31960921</a> , PubMed: <a href="#">39142279</a> , PubMed: <a href="#">40680746</a> ). Catalyzes 'Lys-63'-linked polyubiquitination of monoubiquitinated PCNA at 'Lys-164' in response to genotoxic stress, promoting error-free postreplication repair via template switching (PubMed: <a href="#">18316726</a> , PubMed: <a href="#">18719106</a> ). Acts as an epigenetic regulator by promoting recruitment of DNMT1, thereby ensuring DNA methylation inheritance: specifically binds histone H3 trimethylated at 'Lys-9' (H3K9me3) and mediates histone H3 'Lys-23' polyubiquitination (H3K23ub), a docking site for DNMT1, leading to DNMT1 recruitment and replication-coupled DNA methylation maintenance (PubMed: <a href="#">40680746</a> ). Catalyzes formation of H3K23ub in two steps: first mediates monoubiquitination together with UBE2E1 and UBE2D2, and then extends

ubiquitin chains via 'Lys-63'-linked ubiquitination together with UBE2N and UBE2V2 (PubMed:[40680746](#)). Also acts as a chromatin redodeling factor, thereby regulating transcription (PubMed:[10391891](#), PubMed:[1994885](#), PubMed:[9126292](#)). Exhibits ATP-dependent double-stranded DNA (dsDNA) translocase activity but lacks classical helicase activity; mediates replication fork reversal by concertedly unwinding and annealing nascent and parental strands, thereby suppressing DNA synthesis and maintaining genomic stability (PubMed:[1994885](#)). Resolves G-quadruplex (G4) DNA structures in cooperation with MSH2, limiting replication stress and G4 accumulation across the cell cycle (PubMed:[39142279](#)). Contributes to nucleotide excision repair by evicting lesion-containing oligonucleotides using its HIRAN and ATPase domains (PubMed:[26051180](#)). Can displace single-stranded DNA from triplex structures through ATP-dependent dsDNA translocation (PubMed:[26051180](#), PubMed:[31960921](#)). Also has protein clearing activity at the stalled replication fork, facilitating restart of DNA replication (PubMed:[21795603](#)).

**Cellular Location**

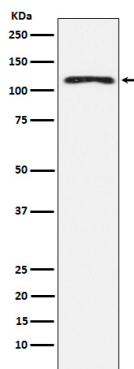
Nucleus. Chromosome

**Tissue Location**

Expressed in brain, heart, kidney, liver, lung, pancreas, placenta and skeletal muscle.

**Images**

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