

HLTF Antibody
Rabbit mAb
Catalog # AP92309

Specification

HLTF Antibody - Product Information

Application	WB, IHC, ICC
Primary Accession	Q14527
Reactivity	Rat
Clonality	Monoclonal
Other Names	
HIP116; HIP116A; HLTF 1; Hltf; HLTF1; p113; RNF80; SMARC A3; SMARCA 3; SMARCA3; SNF2L3; ZBU1;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	113929 Da

HLTF Antibody - Additional Information

Dilution	WB~~1:1000 IHC~~1:100~500 ICC~~N/A
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human HLTF
Description	Has both helicase and E3 ubiquitin ligase activities. Possesses intrinsic ATP-dependent nucleosome-remodeling activity; This activity may be required for transcriptional activation or repression of specific target promoters (By similarity).
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

HLTF Antibody - Protein Information

Name HLTF ([HGNC:11099](#))

Function

Functions as a DNA-dependent ATPase and E3 ubiquitin-protein ligase involved in chromatin regulation and DNA damage tolerance (DDT) (PubMed: [18316726](http://www.uniprot.org/citations/18316726), PubMed: [18719106](http://www.uniprot.org/citations/18719106), PubMed: [26051180](http://www.uniprot.org/citations/26051180), PubMed: [31960921](http://www.uniprot.org/citations/31960921)),

<http://www.uniprot.org/citations/39142279> target="_blank">39142279, PubMed:40680746). 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:18316726, PubMed:18719106). 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:40680746). 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 remodeling 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

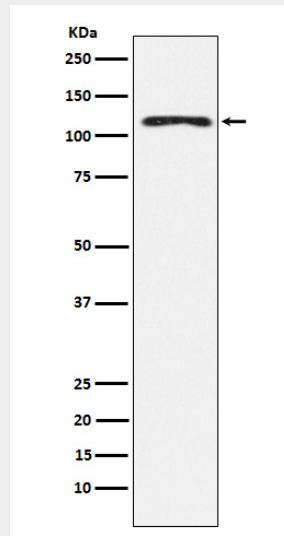
Expressed in brain, heart, kidney, liver, lung, pancreas, placenta and skeletal muscle.

HLTF Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

HLTF Antibody - Images



Western blot analysis of HLTF expression in K562 cell lysate.