

Rabbit LONP1 Polyclonal Antibody | anti-LONP1 antibody

LONP1 Antibody

CATALOG # AAA322945	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS Immunohistochemistry, Western Blot
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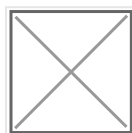
PRODUCT SYNONYMS

LONP1; Polyclonal Antibody; LONP1 Antibody; hLON; hLON ATP dependent protease; LON; lon peptidase 1; mitochondrial; LON protease; Lon protease homolog; Lon protease like protein; Lon protease-like protein; LONHs; LONM_HUMAN; LONP; Lonp1; MGC1498; Mitochondrial ATP dependent protease Lon; Mitochondrial ATP-dependent protease Lon; Mitochondrial lon peptidase 1; PIM1; Protease serine 15; PRSS15; Serine protease 15; anti-LONP1 antibody

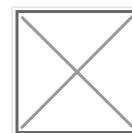
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	LONP1 antibody detects endogenous levels of LONP1.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	895
Applicable Applications for anti-LONP1 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human LONP1.
Subcellular Location	Mitochondrion Matrix.
Tissue Specificity	Duodenum, heart, lung and liver, but not thymus.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES


WB (Western Blot)

Western blot analysis of extracts from various samples, using LONP1 antibody. Lane 1: HeLa treated with blocking peptide. Lane 2: HeLa; Lane 3: Mouse Myeloma cell;


WB (Western Blot)

Western blot analysis of extracts of HeLa cells, using LONP1 antibody.



IHC (Immunohistochemistry)

AAA322945 at 1/100 staining Mouse liver 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 antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-LONP1 antibody	Function: ATP-dependent serine protease that mediates the selective degradation of misfolded, unassembled or oxidatively damaged polypeptides as well as certain short-lived regulatory proteins in the mitochondrial matrix. May also have a chaperone function in the assembly of inner membrane protein complexes. Participates in the regulation of mitochondrial gene expression and in the maintenance of the integrity of the mitochondrial genome. Binds to mitochondrial promoters and RNA in a single-stranded, site-specific, and strand-specific manner. May regulate mitochondrial DNA replication and/or gene expression using site-specific, single-stranded DNA binding to target the degradation of regulatory proteins binding to adjacent sites in mitochondrial promoters (PubMed:12198491, PubMed:15870080, PubMed:17420247, PubMed:8248235). Endogenous substrates include mitochondrial steroidogenic acute regulatory (StAR) protein, helicase Twinkle (TWNK) and the large ribosomal subunit protein bL32m. bL32m is protected from degradation by LONP1 when it is bound to a nucleic acid (RNA), but TWNK is not (PubMed:17579211, PubMed:28377575). Subunit Structure: Homohexamer (PubMed:14739292, PubMed:25369343, PubMed:20222013). Organized in a ring with a central cavity (PubMed:25369343, PubMed:20222013). The ATP-binding and proteolytic domains (AP-domain) form a hexameric chamber, while the N-terminal domain is arranged as a trimer of dimers (PubMed:27632940). DNA and RNA binding is stimulated by substrate and inhibited by ATP binding. Interacts with TWNK and mitochondrial DNA polymerase subunit POLG (PubMed:14739292). Similarity: The Lon N-terminal domains are crucial for the overall structure of the protein, maintaining it in a conformation allowing its proper functioning. The AP-domain (ATP-binding and proteolytic domains) has a closed-ring conformation in the presence of AMP-PNP and its N-terminal entry gate appears closed. Upon ADP binding, it switches to a lock-washer conformation and its N-terminal gate opens. The proteolytic site is connected to the ATP binding site through the GG loop (Gly-893 and Gly-894) and the loop containing Trp-770. Binding of a protein substrate such as beta-casein appears to trigger movement of both these loops as part of the conformational changes which lead to enhanced ATPase and peptidase activities. Belongs to the peptidase S16 family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	451327634
NCBI GeneID	9361
NCBI Accession #	NP_001263408.1
NCBI GenBank Nucleotide #	NM_001276479.1
UniProt Accession #	P36776; P36777; Q8N8K8; Q9UQ95; B3KPH8; D6W635; E5KMH8; F5GZ27
Molecular Weight	Observed: 100 kDa Predicted: 107 kDa
NCBI Official Full Name	Ion protease homolog, mitochondrial isoform 2
NCBI Official Synonym Full Names	Ion peptidase 1, mitochondrial
NCBI Official Symbol	LONP1
NCBI Official Synonym Symbols	LON; LONP; PIM1; hLON; LonHS; CODASS; PRSS15
NCBI Protein Information	Ion protease homolog, mitochondrial
UniProt Protein Name	Lon protease homolog, mitochondrial
UniProt Gene Name	LONP1

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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/lonp1-antibody-immunohistochemistry-western-blot-elisa/322945>