

CLPX Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10767b

Specification

CLPX Antibody (C-term) - Product Information

Application	WB, IHC-P, FC,E
Primary Accession	O76031
Other Accession	O5U2U0 , O9JHS4 , NP_006651.2
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	449-477

CLPX Antibody (C-term) - Additional Information

Gene ID 10845

Other Names

ATP-dependent Clp protease ATP-binding subunit clpX-like, mitochondrial, CLPX

Target/Specificity

This CLPX antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 449-477 amino acids from the C-terminal region of human CLPX.

Dilution

WB~~1:1000

IHC-P~~1:50~100

FC~~1:10~50

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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

CLPX Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

CLPX Antibody (C-term) - Protein Information

Name CLPX ([HGNC:2088](#))

Function ATP-dependent chaperone that functions as an unfoldase. As part of the ClpXP protease complex, it recognizes specific protein substrates, unfolds them using energy derived from ATP hydrolysis, and then translocates them to the proteolytic subunit (CLPP) of the ClpXP complex for degradation (PubMed:[11923310](#), PubMed:[22710082](#), PubMed:[28874591](#)). Thanks to its chaperone activity, it also functions in the incorporation of the pyridoxal phosphate cofactor into 5-aminolevulinate synthase, thereby activating 5-aminolevulinate (ALA) synthesis, the first step in heme biosynthesis (PubMed:[28874591](#)). This chaperone is also involved in the control of mtDNA nucleoid distribution, by regulating mitochondrial transcription factor A (TFAM) activity (PubMed:[22841477](#)).

Cellular Location

Mitochondrion. Mitochondrion matrix, mitochondrion nucleoid

Tissue Location

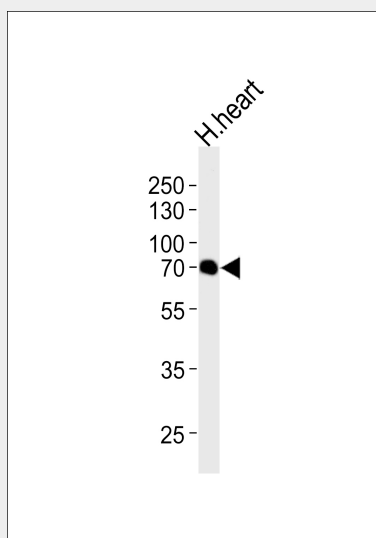
Higher expression in skeletal muscle and heart and to a lesser extent in liver, brain, placenta, lung, kidney and pancreas.

CLPX Antibody (C-term) - Protocols

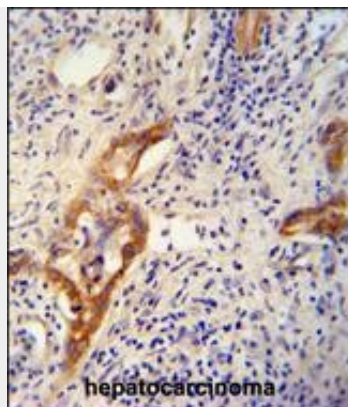
Provided below are standard protocols that you may find useful for product applications.

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

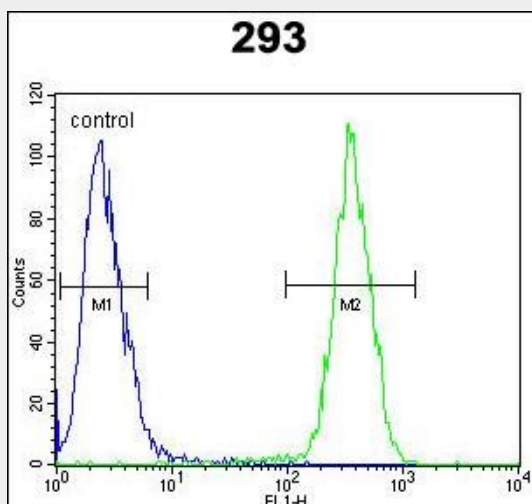
CLPX Antibody (C-term) - Images



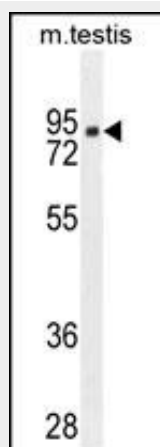
Western blot analysis of lysate from human heart tissue lysate, using CLPX Antibody (C-term)(Cat. #AP10767b). AP10767b was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.



CLPX antibody (C-term) (Cat. #AP10767b) immunohistochemistry analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the CLPX antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



CLPX Antibody (C-term) (Cat. #AP10767b) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



CLPX Antibody (C-term) (Cat. #AP10767b) western blot analysis in mouse testis tissue lysates (35ug/lane). This demonstrates the CLPX antibody detected the CLPX protein (arrow).

CLPX Antibody (C-term) - Background

ATP-dependent specificity component of the Clp protease. It directs the protease to specific substrates. Can perform chaperone functions in the absence of clpP (By similarity).

CLPX Antibody (C-term) - References

Martin, A., et al. Mol. Cell 29(4):441-450(2008) Bogenhagen, D.F., et al. J. Biol. Chem. 283(6):3665-3675(2008) Ewing, R.M., et al. Mol. Syst. Biol. 3, 89 (2007) : Kang, S.G., et al. J. Biol. Chem. 280(42):35424-35432(2005) Kang, S.G., et al. J. Biol. Chem. 277(23):21095-21102(2002)

CLPX Antibody (C-term) - Citations

- [Loss of mitochondrial peptidase Clpp leads to infertility, hearing loss plus growth retardation via accumulation of CLPX, mtDNA and inflammatory factors.](#)