

KD-Validated Anti-CLPP Rabbit Monoclonal Antibody Rabbit monoclonal antibody Catalog # AGI2328

## Specification

# **KD-Validated Anti-CLPP Rabbit Monoclonal Antibody - Product Information**

Application WB, FC, ICC **Primary Accession** 016740 Reactivity Rat, Human, Mouse Clonality Monoclonal Isotype Rabbit IgG Calculated MW Predicted, 30 kDa, observed, 26 kDa KDa Gene Name **CLPP** Aliases **CLPP; Caseinolytic Mitochondrial Matrix Peptidase Proteolytic Subunit; ATP-Dependent Clp Protease Proteolytic** Subunit, Mitochondrial; Endopeptidase Clp; EC 3.4.21.92; ClpP (Caseinolytic Protease, **ATP-Dependent, Proteolytic Subunit, E.** Coli) Homolog; ClpP Caseinolytic Peptidase, ATP-Dependent, Proteolytic Subunit Homolog (E. Coli); ClpP **Caseinolytic Protease, ATP-Dependent,** Proteolytic Subunit Homolog (E. Coli); ClpP **Caseinolytic Peptidase, ATP-Dependent,** Proteolytic Subunit Homoloa: ClpP **Caseinolytic Protease, ATP-Dependent, Proteolytic Subunit Homolog; Putative ATP-Dependent Clp Protease Proteolytic** Subunit, Mitochondrial; ATP-Dependent Protease ClpAP (E. Coli), Proteolytic Subunit, Human; ClpP Caseinolytic Peptidase ATP-Dependent, Proteolytic Subunit; ATP-Dependent; Protease ClpAP, Proteolytic Subunit, Human; DFNB81; PRLTS3 A synthesized peptide derived from human Immunogen **CLPP** 

### **KD-Validated Anti-CLPP Rabbit Monoclonal Antibody - Additional Information**

Gene ID 8192 Other Names ATP-dependent Clp protease proteolytic subunit, mitochondrial, 3.4.21.92, Caseinolytic mitochondrial matrix peptidase proteolytic subunit {ECO:0000312|HGNC:HGNC:2084}, Endopeptidase Clp, CLPP (<a href="http://www.genenames.org/cgi-bin/gene\_symbol\_report?hgnc\_id=2084" target="\_blank">HGNC:2084</a>)



# KD-Validated Anti-CLPP Rabbit Monoclonal Antibody - Protein Information

# Name CLPP (HGNC:2084)

## Function

Protease component of the ClpXP complex that cleaves peptides and various proteins in an ATP-dependent process. Has low peptidase activity in the absence of CLPX. The ClpXP complex can degrade CSN1S1, CSN2 and CSN3, as well as synthetic peptides (in vitro) and may be responsible for a fairly general and central housekeeping function rather than for the degradation of specific substrates (PubMed:<a href="http://www.uniprot.org/citations/11923310" target="\_blank">11923310</a>, PubMed:<a href="http://www.uniprot.org/citations/15522782" target="\_blank">15522782</a>). Cleaves PINK1 in the mitochondrion (PubMed:<a href="http://www.uniprot.org/citations/15522782" target="\_blank">22354088" target="\_blank">22354088</a>).

**Cellular Location** Mitochondrion matrix

### Tissue Location

Detected in liver (at protein level). Predominantly expressed in skeletal muscle. Intermediate levels in heart, liver and pancreas. Low in brain, placenta, lung and kidney

### **KD-Validated Anti-CLPP Rabbit Monoclonal Antibody - Protocols**

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

### **KD-Validated Anti-CLPP Rabbit Monoclonal Antibody - Images**



Western blotting analysis using anti-CLPP antibody (Cat#AGI2328). Total cell lysates (30 µg) from



various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-CLPP antibody (Cat#AGI2328, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-CLPP antibody (Cat#AGI2328). CLPP expression in wild type (WT) and CLPP shRNA knockdown (KD) HeLa cells with 30  $\mu$ g of total cell lysates.  $\beta$ -Tubulin serves as a loading control. The blot was incubated with anti-CLPP antibody (Cat#AGI2328, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of CLPP expression in HepG2 cells using anti-CLPP antibody (Cat#AGI2328, 1:2,000). Green, isotype control; red, CLPP.



Immunocytochemical staining of HepG2 cells with CLPP antibody (Cat#AGI2328, 1:1,000). Nuclei were stained blue with DAPI; CLPP was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar: 20  $\mu$ m.