

**CLUS Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP50693****Specification**

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**CLUS Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P10909</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52,58,32,49,54 KDa
Antigen Region	418-449

**CLUS Antibody - Additional Information****Gene ID** 1191**Other Names**

Clusterin, Aging-associated gene 4 protein, Apolipoprotein J, Apo-J, Complement cytolysis inhibitor, CLI, Complement-associated protein SP-40, Ku70-binding protein 1, NA1/NA2, Testosterone-repressed prostate message 2, TRPM-2, Clusterin beta chain, ApoJalpha, Complement cytolysis inhibitor a chain, Clusterin alpha chain, ApoJbeta, Complement cytolysis inhibitor b chain, CLU, APOJ, CLI, KUB1

**Dilution**

WB~~1:1000

**Format**

Rabbit IgG in phosphate buffered saline (without Mg<sup>2+</sup> and Ca<sup>2+</sup>), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.

**Storage Conditions**

-20°C

**CLUS Antibody - Protein Information****Name** CLU ([HGNC:2095](#))**Function**

[Isoform 1]: Functions as extracellular chaperone that prevents aggregation of non native proteins (PubMed:<a href="http://www.uniprot.org/citations/11123922" target="\_blank">11123922</a>, PubMed:<a href="http://www.uniprot.org/citations/19535339" target="\_blank">19535339</a>). Prevents stress-induced aggregation of blood plasma proteins (PubMed:<a href="http://www.uniprot.org/citations/11123922" target="\_blank">11123922</a>, PubMed:<a href="http://www.uniprot.org/citations/12176985" target="\_blank">12176985</a>, PubMed:<a href="http://www.uniprot.org/citations/17260971" target="\_blank">17260971</a>, PubMed:<a href="http://www.uniprot.org/citations/19996109" target="\_blank">19996109</a>). Inhibits

formation of amyloid fibrils by APP, APOC2, B2M, CALCA, CSN3, SNCA and aggregation-prone LYZ variants (in vitro) (PubMed:<a href="http://www.uniprot.org/citations/12047389" target="\_blank">12047389</a>, PubMed:<a href="http://www.uniprot.org/citations/17407782" target="\_blank">17407782</a>, PubMed:<a href="http://www.uniprot.org/citations/17412999" target="\_blank">17412999</a>). Does not require ATP (PubMed:<a href="http://www.uniprot.org/citations/11123922" target="\_blank">11123922</a>). Maintains partially unfolded proteins in a state appropriate for subsequent refolding by other chaperones, such as HSPA8/HSC70 (PubMed:<a href="http://www.uniprot.org/citations/11123922" target="\_blank">11123922</a>). Does not refold proteins by itself (PubMed:<a href="http://www.uniprot.org/citations/11123922" target="\_blank">11123922</a>). Binding to cell surface receptors triggers internalization of the chaperone-client complex and subsequent lysosomal or proteasomal degradation (PubMed:<a href="http://www.uniprot.org/citations/21505792" target="\_blank">21505792</a>). Protects cells against apoptosis and against cytolysis by complement: inhibits assembly of the complement membrane attack complex (MAC) by preventing polymerization of C9 pore component of the MAC complex (PubMed:<a href="http://www.uniprot.org/citations/2780565" target="\_blank">2780565</a>, PubMed:<a href="http://www.uniprot.org/citations/1903064" target="\_blank">1903064</a>, PubMed:<a href="http://www.uniprot.org/citations/2601725" target="\_blank">2601725</a>, PubMed:<a href="http://www.uniprot.org/citations/2721499" target="\_blank">2721499</a>, PubMed:<a href="http://www.uniprot.org/citations/1551440" target="\_blank">1551440</a>, PubMed:<a href="http://www.uniprot.org/citations/9200695" target="\_blank">9200695</a>, PubMed:<a href="http://www.uniprot.org/citations/34667172" target="\_blank">34667172</a>). Intracellular forms interact with ubiquitin and SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complexes and promote the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:<a href="http://www.uniprot.org/citations/20068069" target="\_blank">20068069</a>). Promotes proteasomal degradation of COMMD1 and IKBKB (PubMed:<a href="http://www.uniprot.org/citations/20068069" target="\_blank">20068069</a>). Modulates NF-kappa-B transcriptional activity (PubMed:<a href="http://www.uniprot.org/citations/12882985" target="\_blank">12882985</a>). A mitochondrial form suppresses BAX-dependent release of cytochrome c into the cytoplasm and inhibit apoptosis (PubMed:<a href="http://www.uniprot.org/citations/16113678" target="\_blank">16113678</a>, PubMed:<a href="http://www.uniprot.org/citations/17689225" target="\_blank">17689225</a>). Plays a role in the regulation of cell proliferation (PubMed:<a href="http://www.uniprot.org/citations/19137541" target="\_blank">19137541</a>). An intracellular form suppresses stress-induced apoptosis by stabilizing mitochondrial membrane integrity through interaction with HSPA5 (PubMed:<a href="http://www.uniprot.org/citations/22689054" target="\_blank">22689054</a>). Secreted form does not affect caspase or BAX- mediated intrinsic apoptosis and TNF-induced NF-kappa-B-activity (PubMed:<a href="http://www.uniprot.org/citations/24073260" target="\_blank">24073260</a>). Secreted form act as an important modulator during neuronal differentiation through interaction with STMN3 (By similarity). Plays a role in the clearance of immune complexes that arise during cell injury (By similarity).

### Cellular Location

[Isoform 1]: Secreted. Note=Can retrotranslocate from the secretory compartments to the cytosol upon cellular stress. [Isoform 6]: Cytoplasm. Note=Keeps cytoplasmic localization in stressed and unstressed cell.

### Tissue Location

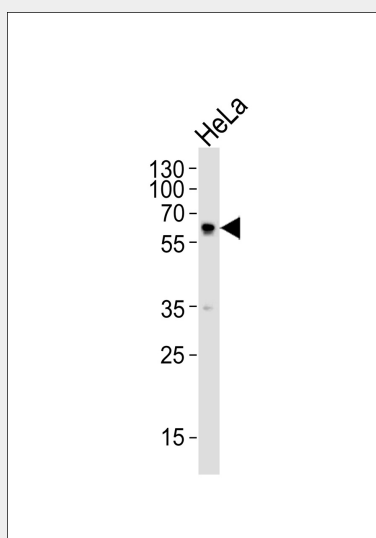
Detected in blood plasma, cerebrospinal fluid, milk, seminal plasma and colon mucosa. Detected in the germinal center of colon lymphoid nodules and in colon parasympathetic ganglia of the Auerbach plexus (at protein level). Ubiquitous. Detected in brain, testis, ovary, liver and pancreas, and at lower levels in kidney, heart, spleen and lung.

### CLUS 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](#)

## CLUS Antibody - Images



Western blot analysis of lysate from HeLa cell line, using CLUS Antibody (AP50693). AP50693 was diluted at 1:1000. A goat anti-rabbit IgG H&L (HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35 µg.

## CLUS Antibody - Background

Isoform 1 functions as extracellular chaperone that prevents aggregation of nonnative proteins. Prevents stress-induced aggregation of blood plasma proteins. Inhibits formation of amyloid fibrils by APP, APOC2, B2M, CALCA, CSN3, SNCA and aggregation-prone LYZ variants (in vitro). Does not require ATP. Maintains partially unfolded proteins in a state appropriate for subsequent refolding by other chaperones, such as HSPA8/HSC70. Does not refold proteins by itself. Binding to cell surface receptors triggers internalization of the chaperone-client complex and subsequent lysosomal or proteasomal degradation. Secreted isoform 1 protects cells against apoptosis and against cytolysis by complement. Intracellular isoforms interact with ubiquitin and SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complexes and promote the ubiquitination and subsequent proteasomal degradation of target proteins. Promotes proteasomal degradation of COMMD1 and IKBKB. Modulates NF-κB transcriptional activity. Nuclear isoforms promote apoptosis. Mitochondrial isoforms suppress BAX-dependent release of cytochrome c into the cytoplasm and inhibit apoptosis. Plays a role in the regulation of cell proliferation.

## CLUS Antibody - References

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Wong P., et al. Eur. J. Biochem. 221:917-925 (1994).  
Ota T., et al. Nat. Genet. 36:40-45 (2004).

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Bechtel S.,et al.BMC Genomics 8:399-399(2007).